

Be professional, be the best in China,
and to become a leading Global brand.



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The contents of sample may change due to upgrading of products, without further notice.
The final explanation right belongs to our company.

V2301

VAC series



Modular Air Handling Unit



Company profile

Veck (Tianjin) Co. Ltd. is located in the National Development Zone of Tianjin Wuqing. It is an enterprise with integrated research and development, manufacturing, sales and service activities. Veck is ISO 9001 – 2015 certified for by Quality Management System by March 2018. We are led by a professional Management team, supported by an innovative R & D team with comprehensive testing facilities and equipped with first-class manufacturing facilities. This synergy culminated in our high-quality products which received various certifications namely AHRI, CRAA, 3C and Energy Saving product labels. More than 30 sales and service branches are opened throughout China to provide good and efficient services for our customer base. These approaches are all in line with our pursuit to meet and exceed professional and industry standards.

Veck is dedicated to becoming an expert in air quality; both in air conditioning and air purification. In this endeavor, Veck has patents for advanced technology; ranging from energy saving to outstanding performance. We not only provide products to meet customers needs, but also provide a holistic solution to create clean and comfortable environment for our customers.

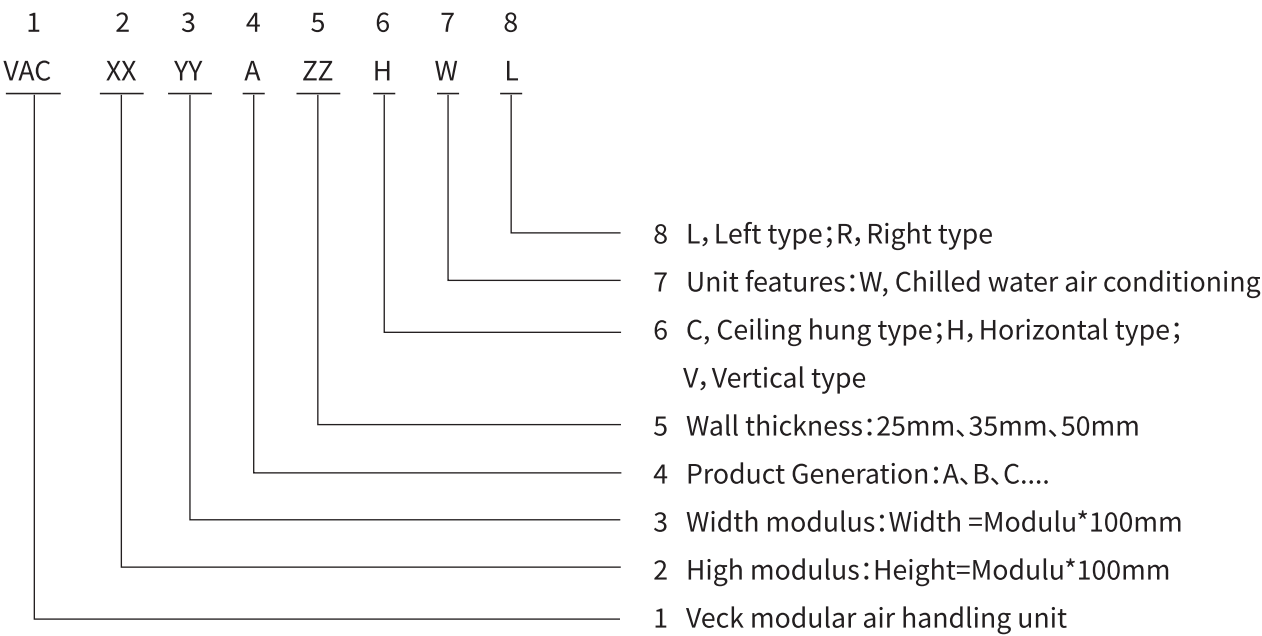
Veck believes that the basic requirements of the customer is to receive high-quality products as well as good and efficient service.

Veck believes and strives for a future that by consistently manufacturing high quality products, Veck will become a respected enterprise.



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Model Number Descriptions-Modular Air Handling Unit-VAC



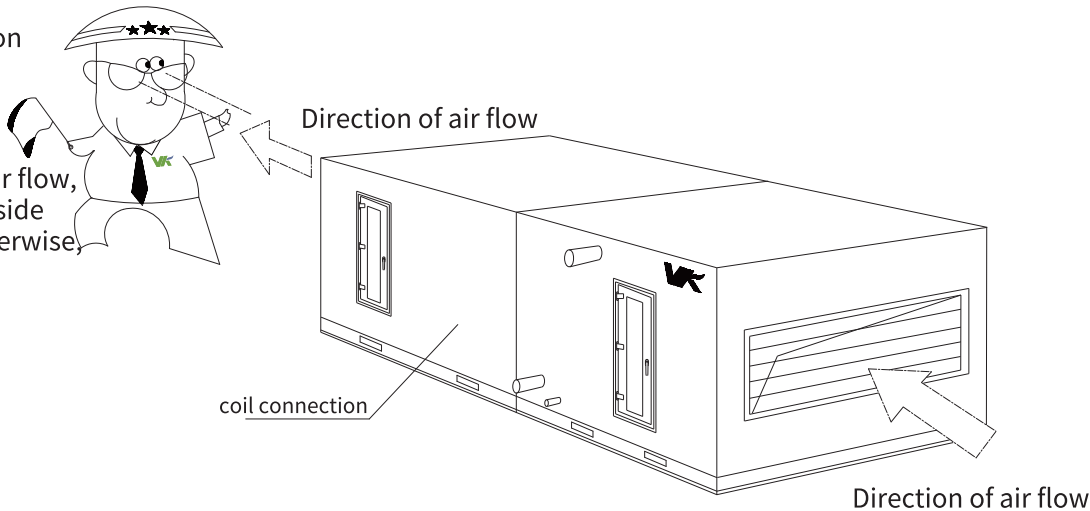
For example:VAC1519A50HWL

High 15 mold, wide 19mold, design number A, plate thickness50 mm, horizontal, chilled
water air conditioning unit, left model; Unit contour height = height modulus * 100+T+ base
height, contour width = width modulus *100 +T;25mm thick series T=50, 35mm thick series
T=70, 50mm thick series T=100;Unit base height 100mm.

Method to Determine the Side of Unit

Right Side Configuration

Face the direction of air flow,
coil connection at left side
indicates left type, otherwise,
right type.



Air volume table

(Unit: m³/h)

Model		Face velocity of the coil (m/s)					
		2.00	2.25	2.50	2.80	3.00	3.50
06	07	1567	1762	1958	2193	2350	2742
06	08	1790	2014	2238	2507	2686	3133
06	09	2207	2483	2758	3089	3310	3862
06	10	2527	2843	3158	3537	3790	4422
06	11	2847	3203	3558	3985	4270	4982
07	10	2888	3249	3610	4043	4332	5053
07	11	3253	3660	4067	4555	4880	5694
08	10	3610	4061	4512	5053	5414	6317
08	11	4067	4575	5083	5694	6100	7117
08	12	4524	5089	5655	6334	6786	7917
08	13	4981	5604	6226	6974	7472	8717
08	14	5438	6118	6798	7614	8158	9517
10	12	5881	6616	7351	8234	8822	10292
10	13	6476	7285	8094	9066	9713	11332
10	14	7070	7954	8837	9898	10605	12372
10	15	7664	8622	9580	10730	11496	13412
10	16	8259	9291	10323	11562	12388	14453
11	15	8843	9949	11054	12381	13265	15476
11	16	9529	10720	11911	13341	14294	16676
11	17	10215	11492	12769	14301	15322	17876
12	17	10896	12258	13620	15254	16344	19068
12	18	11628	13081	14534	16279	17441	20348
13	17	12258	13790	15322	17161	18387	21451
13	18	13081	14716	16351	18313	19621	22892
13	19	13904	15642	17380	19465	20856	24332
14	19	14676	16511	18345	20547	22015	25684
14	20	15545	17488	19431	21763	23318	27204
15	19	16221	18249	20277	22710	24332	28387
16	19	16994	19118	21242	23791	25491	29739
15	21	18141	20409	22677	25398	27212	31748
16	21	19005	21381	23757	26607	28508	33259
16	22	20011	22513	25014	28016	30017	35020
17	22	20921	23536	26151	29289	31381	36611
16	24	22023	24776	27529	30832	33034	38540
18	22	22740	25582	28425	31836	34110	39795
19	22	24559	27629	30699	34383	36839	42979
19	23	25794	29018	32242	36111	38690	45139
19	24	27028	30407	33785	37839	40542	47299
19	25	28263	31795	35328	39568	42394	49459
20	25	29309	32973	36637	41033	43964	51291
20	26	30589	34413	38237	42825	45884	53531
21	26	32774	36871	40968	45884	49162	57355
23	26	36052	40558	45065	50473	54078	63091
22	28	36702	41289	45877	51382	55052	64228
25	28	42621	47949	53276	59670	63932	74587
25	31	47559	53504	59449	66582	71338	83228
25	34	52497	59059	65621	73495	78745	91869
28	34	59788	67261	74735	83703	89682	104629
28	38	67286	75697	84107	94200	100929	117750
29	40	72767	81863	90959	101874	109151	127343
31	41	79292	89204	99115	111009	118938	138761
32	45	89467	100650	111833	125253	134200	156567
35	46	101523	114213	126904	142132	152285	177665
37	50	117371	132042	146713	164319	176056	205398
38	55	136921	154037	171152	191690	205382	239612
43	58	165054	185685	206317	231075	247581	
45	65	191575	215522	239469	268205	280000	

■ General Data - Cooling coil

Model			Fresh air condition						Return air condition					
			4 rows		6 rows		8 rows		4 rows		6 rows		8 rows	
			Sensible cooling capacity kW	Total cooling capacity kW	Sensible cooling capacity kW	Total cooling capacity kW	Sensible cooling capacity kW	Total cooling capacity kW	Sensible cooling capacity kW	Total cooling capacity kW	Sensible cooling capacity kW	Total cooling capacity kW	Sensible cooling capacity kW	Total cooling capacity kW
06	07	1958	9.1	21.2	12.1	29.3	13.1	31.3	8.1	9.1	9.1	12.1	10.1	15.2
06	08	2238	11.1	24.2	14.1	33.3	15.2	36.4	9.1	11.1	10.1	14.1	11.1	17.2
06	09	2758	13.1	29.3	17.2	41.4	18.2	44.4	11.1	13.1	12.1	17.2	14.1	21.2
06	10	3158	15.2	33.3	19.2	46.5	21.2	50.5	12.1	15.2	14.1	19.2	16.2	24.2
06	11	3558	17.2	37.4	22.2	52.5	23.2	57.6	14.1	17.2	16.2	22.2	18.2	27.3
07	10	3610	17.2	38.4	22.2	53.5	24.2	58.6	14.1	17.2	16.2	22.2	18.2	28.3
07	11	4067	19.2	43.4	25.3	60.6	27.3	65.7	16.2	20.2	18.2	25.3	21.2	31.3
08	10	4512	21.2	47.5	28.3	66.7	30.3	72.7	18.2	22.2	20.2	27.3	23.2	35.4
08	11	5083	24.2	53.5	31.3	75.8	34.3	81.8	20.2	24.2	22.2	31.3	26.3	39.4
08	12	5655	27.3	59.6	35.4	83.8	37.4	90.9	22.2	27.3	25.3	34.3	29.3	43.4
08	13	6226	29.3	66.7	38.4	92.9	41.4	100.0	24.2	30.3	27.3	38.4	31.3	48.5
08	14	6798	32.3	72.7	42.4	101.0	45.5	109.1	27.3	33.3	30.3	41.4	34.3	52.5
10	12	7351	35.4	77.8	45.5	109.1	49.5	118.2	29.3	35.4	32.3	45.5	37.4	56.6
10	13	8094	38.4	85.9	50.5	120.2	53.5	130.3	32.3	39.4	36.4	49.5	41.4	62.6
10	14	8837	42.4	93.9	54.5	131.3	58.6	142.4	34.3	42.4	39.4	54.5	45.5	68.7
10	15	9580	45.5	102.0	59.6	142.4	63.6	154.5	37.4	46.5	42.4	58.6	48.5	73.7
10	16	10323	49.5	110.1	63.6	153.5	68.7	166.7	40.4	50.5	45.5	63.6	52.5	79.8
11	15	11054	52.5	117.2	68.7	164.6	73.7	177.8	43.4	53.5	49.5	67.7	56.6	85.9
11	16	11911	56.6	126.3	73.7	176.8	79.8	191.9	46.5	57.6	52.5	72.7	60.6	91.9
11	17	12769	60.6	135.3	78.8	189.9	84.8	206.0	50.5	61.6	56.6	78.8	64.6	99.0
12	17	13620	64.6	144.4	84.8	202.0	90.9	219.2	53.5	65.7	60.6	83.8	69.7	105.0
12	18	14534	69.7	154.5	89.9	216.1	97.0	234.3	57.6	70.7	64.6	88.9	73.7	112.1
13	17	15322	72.7	162.6	94.9	227.3	102.0	246.4	60.6	74.7	67.7	93.9	77.8	119.2
13	18	16351	77.8	173.7	101.0	243.4	109.1	263.6	64.6	79.8	72.7	100.0	82.8	126.3
13	19	17380	82.8	184.8	108.1	258.6	116.2	279.8	68.7	83.8	76.8	107.1	88.9	134.3
14	19	18345	87.9	194.9	114.1	272.7	122.2	295.9	72.7	88.9	81.8	112.1	93.9	142.4
14	20	19431	92.9	206.0	120.2	288.9	129.3	313.1	76.8	93.9	85.9	119.2	99.0	150.5
15	19	20277	97.0	215.1	125.2	301.0	135.3	327.2	79.8	98.0	89.9	124.2	103.0	157.6
16	19	21242	101.0	225.2	131.3	316.1	141.4	342.4	83.8	103.0	93.9	130.3	108.1	164.6
15	21	22677	108.1	241.4	140.4	337.3	151.5	365.6	89.9	110.1	101.0	139.4	115.1	175.7
16	21	23757	113.1	252.5	147.5	353.5	158.6	382.8	93.9	115.1	105.0	145.4	121.2	183.8
16	22	25014	119.2	265.6	154.5	371.7	166.7	403.0	99.0	121.2	111.1	153.5	127.3	193.9
17	22	26151	124.2	277.8	161.6	388.9	174.7	421.2	103.0	127.3	116.2	160.6	133.3	203.0
16	24	27529	131.3	292.9	170.7	409.1	183.8	443.4	108.1	133.3	122.2	168.7	140.4	213.1
18	22	28425	135.3	302.0	175.7	422.2	189.9	458.5	112.1	138.4	126.3	174.7	144.4	220.2
19	22	30699	146.5	326.2	189.9	456.5	205.0	494.9	121.2	148.5	136.4	187.9	156.6	237.4
19	23	32242	153.5	342.4	200.0	478.7	215.1	519.1	127.3	156.6	143.4	198.0	164.6	249.5
19	24	33785	160.6	358.6	209.1	502.0	225.2	544.4	133.3	163.6	149.5	207.1	171.7	261.6
19	25	35328	168.7	375.7	219.2	525.2	235.3	569.6	139.4	171.7	156.6	217.2	179.8	273.7
20	25	36637	174.7	388.9	227.3	544.4	244.4	590.9	144.4	177.8	162.6	224.2	186.9	283.8
20	26	38237	181.8	406.0	236.3	568.6	254.5	616.1	150.5	185.8	169.7	234.3	194.9	295.9
21	26	40968	194.9	435.3	253.5	609.0	272.7	660.5	161.6	199.0	181.8	251.5	209.1	317.1
23	26	45065	214.1	478.7	278.8	669.6	300.0	726.2	177.8	218.2	200.0	276.7	229.3	349.5
22	28	45877	218.2	487.8	283.8	681.8	306.0	739.3	180.8	222.2	204.0	281.8	233.3	355.5
25	28	53276	253.5	565.6	330.3	791.8	355.5	858.5	210.1	258.6	236.3	327.2	271.7	413.1
25	31	59449	282.8	631.3	368.7	883.8	395.9	957.5	234.3	287.9	263.6	364.6	303.0	460.6
25	34	65621	312.1	696.9	406.0	974.7	437.3	1057.5	258.6	318.2	290.9	402.0	334.3	508.0
28	34	74735	355.5	793.9	462.6	1111.0	497.9	1203.9	294.9	362.6	331.3	458.5	380.8	578.7
28	38	84107	401.0	893.9	521.2	1249.4	560.6	1355.4	331.3	408.0	373.7	516.1	428.2	651.5
29	40	90959	433.3	966.6	563.6	1351.4	606.0	1465.5	358.6	441.4	404.0	557.5	463.6	705.0
31	41	99115	471.7	1053.4	614.1	1472.6	660.5	1596.8	390.9	480.8	439.4	608.0	505.0	767.6
32	45	111833	532.3	1188.8	692.9	1661.5	745.4	1801.8	440.4	542.4	495.9	685.8	569.6	866.6
35	46	126904	604.0	1348.4	785.8	1885.7	846.4	2045.3	500.0	615.1	563.6	778.7	646.4	982.7
37	50	146713	698.9	1558.4	909.0	2179.6	977.7	2364.4	578.7	712.1	651.5	899.9	747.4	1136.3
38	55	171152	815.1	1819.0	1060.5	2543.2	1141.3	2758.3	674.7	830.2	759.5	1049.4	871.6	1326.1
43	58	206317	982.7	2192.7	1277.7	3065.4	1375.6	3324.9	813.1	1000.9	915.1	1265.5	1050.4	1597.8
45	65	239469	1140.3	2544.2	1482.7	3558.2	1596.8	3859.2	944.4	1161.5	1062.5	1468.5	1219.1	1855.4

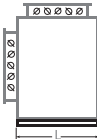
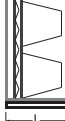
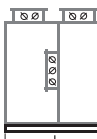
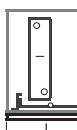
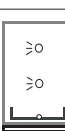
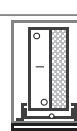
Notes:

1. Fresh air Condition: Fresh air, 35°C DB/28°C WB;
2. Return air Condition: Return air, 27°C DB/19.5°C WB;
3. Cooling coil water supply: 7°C (inlet) /12°C (outlet) , Face velocity of the cooler: 2.5m/s;
4. All the specification are subjected to change by manufacturer without prior notices.

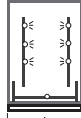
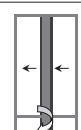
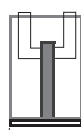
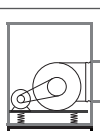
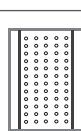
■ General Data - Heating coil

Model			Fresh air condition				Return air condition			
			1 rows	2 rows	3 rows	4 rows	1 rows	2 rows	3 rows	4 rows
			Total heat capacity kW	Total heat capacity kW	Total heat capacity kW	Total heat capacity kW	Total heat capacity kW	Total heat capacity kW	Total heat capacity kW	Total heat capacity kW
06	07	1958	12.1	18.2	23.2	26.3	9.1	14.1	19.2	21.2
06	08	2238	14.1	20.2	26.3	30.3	10.1	16.2	21.2	24.2
06	09	2758	17.2	25.3	32.3	37.4	12.1	20.2	26.3	30.3
06	10	3158	20.2	29.3	37.4	42.4	14.1	23.2	30.3	34.3
06	11	3558	22.2	32.3	41.4	47.5	16.2	25.3	34.3	39.4
07	10	3610	23.2	33.3	42.4	48.5	16.2	26.3	34.3	39.4
07	11	4067	26.3	37.4	47.5	54.5	18.2	29.3	39.4	44.4
08	10	4512	28.3	41.4	52.5	60.6	20.2	32.3	43.4	49.5
08	11	5083	32.3	46.5	59.6	68.7	23.2	36.4	49.5	55.6
08	12	5655	36.4	52.5	65.7	75.8	25.3	41.4	54.5	62.6
08	13	6226	39.4	57.6	72.7	83.8	28.3	45.5	59.6	68.7
08	14	6798	43.4	62.6	79.8	91.9	30.3	49.5	65.7	74.7
10	12	7351	46.5	67.7	85.9	99.0	33.3	53.5	70.7	80.8
10	13	8094	51.5	74.7	94.9	109.1	36.4	58.6	77.8	88.9
10	14	8837	56.6	81.8	103.0	119.2	39.4	63.6	84.8	97.0
10	15	9580	60.6	87.9	112.1	129.3	42.4	69.7	91.9	106.1
10	16	10323	65.7	94.9	121.2	139.4	46.5	74.7	100.0	114.1
11	15	11054	70.7	102.0	129.3	148.5	49.5	79.8	107.1	122.2
11	16	11911	75.8	110.1	139.4	160.6	53.5	85.9	115.1	131.3
11	17	12769	81.8	117.2	149.5	171.7	57.6	91.9	123.2	140.4
12	17	13620	86.9	125.2	159.6	183.8	60.6	99.0	131.3	150.5
12	18	14534	92.9	134.3	169.7	195.9	64.6	105.0	140.4	160.6
13	17	15322	98.0	141.4	178.8	206.0	68.7	111.1	147.5	168.7
13	18	16351	104.0	150.5	190.9	220.2	72.7	118.2	157.6	179.8
13	19	17380	111.1	159.6	203.0	234.3	77.8	125.2	167.7	191.9
14	19	18345	117.2	168.7	214.1	247.5	81.8	132.3	176.8	202.0
14	20	19431	124.2	178.8	227.3	261.6	86.9	140.4	187.9	214.1
15	19	20277	129.3	186.9	237.4	272.7	90.9	146.5	195.9	223.2
16	19	21242	135.3	195.9	248.5	285.8	94.9	153.5	205.0	234.3
15	21	22677	144.4	209.1	265.6	305.0	101.0	163.6	219.2	249.

■ Segment specification

Segment name	Diagrammatic drawing	Dimensions (Reference only)
Mixing section		Air handling unit model L 0607—1117 600 1217—2126 800 2326—2534 1000 2834—4565 1200
External filter		External filter is installed outside the unit and does not occupy internal space.
Plate filter		L=100 If the plate filter is placed outside the unit, it will not take up internal space
Bag filter Folding filter		Bag filter L=400 Folding filter L=400
Fresh air and exhaust air section		Air handling unit Model L 0607—1925 1200 2025—2940 1500 3141—4565 1800
Cooling coil section		Air handling unit Model L(1-4 rows) L(5-6rows) L(8-12rows) 0607-2940 600 700 900 3141-4565 1000 1000 1200
Heating coil section		Air handling unit Model L(1-2 rows) 0607—2940 300 3141—4565 600
Electric heating section		T L <4 300 ≥4 700 T=Electric heater power(W)/Air volume(m³/h)
Steam humidification section		L = 600 If the steam humidifier is behind the fan, L=900mm
Wet film humidification section		The wet film humidifier and cooling coil are put together without extra space. If separate to prevent the wet film humidifier, L=600mm

■ Segment specification

Segment name	Diagrammatic drawing	Dimensions (Reference only)
High-pressure fog humidifier section		A water baffle board must be configured, L=900mm
Spray thrower section		L= 2100
Heat recovery section		Determine according to actual use.
Dehumidifying section		Determine according to actual use.
Fan section		L=700~3000 Refer to the size table for functional segment
Diffuser section		L= 600~900 Determine according to actual use.
Muffler section		L= 500, 800, 1100 Three specifications are available to the user
Transition section		L= 600
Air supply section		Air handling unit model L 0607—1117 600 1217—2126 800 2326—2534 1000 2834—4565 1200
Other functional sections	Water baffle board	L=0
	Evaporative cooler	L=900
	Cartridge filter	L=1800
	Combustor	L=3000

Size table of functional sections

Model		Mixing section	Plate filter	Bag filter	Folding filter	Fresh air and exhaust air section	Cooling coil 1-4 rows	Cooling coil 5-6 rows	Cooling coil 8-12 rows	Heating coil	Transition section	Muffler section	Fan offset	Fan postposition	Notes
06	07	600	100	400	400	1200	600	700	900	300	600	800		1100(160~225)	For non-standard unit sizes, please consult VECK
06	08	600	100	400	400	1200	600	700	900	300	600	800		1100(160~225)	
06	09	600	100	400	400	1200	600	700	900	300	600	800	700(200)	1100(250)	
06	10	600	100	400	400	1200	600	700	900	300	600	800	800(200)	1100(250)	
06	11	600	100	400	400	1200	600	700	900	300	600	800	800(225)	1100(250)	
07	10	600	100	400	400	1200	600	700	900	300	600	800	800(200)	1200(280)	
07	11	600	100	400	400	1200	600	700	900	300	600	800	800(250)	1200(280)	
08	10	600	100	400	400	1200	600	700	900	300	600	800	800(200)	1200(315)	
08	11	600	100	400	400	1200	600	700	900	300	600	800	800(250)	1300(315)	
08	12	600	100	400	400	1200	600	700	900	300	600	800	800(315)	1300(315)	
08	13	600	100	400	400	1200	600	700	900	300	600	800	800(315)	1300(315)	
08	14	600	100	400	400	1200	600	700	900	300	600	800	800(315)	1300(315)	
10	12	600	100	400	400	1200	600	700	900	300	600	800	800(315)	1500(400)	
10	13	600	100	400	400	1200	600	700	900	300	600	800	900(355)	1500(400)	
10	14	600	100	400	400	1200	600	700	900	300	600	800	900(355)	1500(400)	
10	15	600	100	400	400	1200	600	700	900	300	600	800	1000(400)	1500(400)	
10	16	600	100	400	400	1200	600	700	900	300	600	800	1000(400)	1500(400)	
11	15	600	100	400	400	1200	600	700	900	300	600	800	1000(400)	1700(450)	
11	16	600	100	400	400	1200	600	700	900	300	600	800	1000(400)	1700(450)	
11	17	600	100	400	400	1200	600	700	900	300	600	800	1100(450)	1700(450)	
12	17	800	100	400	400	1200	600	700	900	300	600	800	1100(450)	1800(500)	
12	18	800	100	400	400	1200	600	700	900	300	600	800	1200(500)	1800(500)	
13	17	800	100	400	400	1200	600	700	900	300	600	800	1100(450)	2000(560)	
13	18	800	100	400	400	1200	600	700	900	300	600	800	1200(500)	2000(560)	
13	19	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2000(560)	
14	19	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2300(630)	
14	20	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2300(630)	
15	19	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2300(630)	
16	19	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2300(630)	
15	21	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2300(630)	
16	21	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	2400(710)	
16	22	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2400(710)	
17	22	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2400(710)	
16	24	800	100	400	400	1200	600	700	900	300	600	800	1700(710)	2400(710)	
18	22	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2600(800)	
19	22	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2600(800)	
19	23	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2600(800)	
19	24	800	100	400	400	1200	600	700	900	300	600	800	1700(710)	2600(800)	
19	25	800	100	400	400	1200	600	700	900	300	600	800	1700(710)	3200(900)	
20	25	800	100	400	400	1500	600	700	900	300	600	800	1700(710)	3200(900)	
20	26	800	100	400	400	1500	600	700	900	300	600	800	1800(800)	3200(900)	
21	26	800	100	400	400	1500	600	700	900	300	600	800	1800(800)	3200(900)	
23	26	1000	100	400	400	1500	600	700	900	300	600	800	1800(800)	3200(900)	
22	28	1000	100	400	400	1500	600	700	900	300	600	800	1800(800)	3300(1000)	
25	28	1000	100	400	400	1500	600	700	900	300	600	800	1800(800)	3300(1000)	
25	31	1000	100	400	400	1500	600	700	900	300	600	800	2200(1000)	3300(1000)	
25	34	1000	100	400	400	1500	600	700	900	300	600	800	2200(1000)	3300(1000)	
28	34	1200	100	400	400	1500	600	700	900	300	600	800	2200(1000)	3300(1000)	
28	38	1200	100	400	400	1500	600	700	900	300	600	800		2600(800x2)	
29	40	1200	100	400	400	1500	600	700	900	300	600	800		2600(800x2)	
31	41	1200	100	400	400	1800	1000	1000	1200	600	600	800		2600(800x2)	
32	45	1200	100	400	400	1800	1000	1000	1200	600	600	800		3200(900x2)	
35	46	1200	100	400	400	1800	1000	1000	1200	600	600	800		3300(1000x2)	
37	50	1200	100	400	400	1800	1000	1000	1200	600	600	800		3300(1000x2)	
38	55	1200	100	400	400	1800	1000	1000	1200	600	600	800		3400(1120x2)	
43	58	1200	100	400	400	1800	1000	1000	1200	600	600	800		3400(1120x2)	
45	65	1200	100	400	400	1800	1000	1000	1200	600	600	800		3500(1250x2)	

Notes:

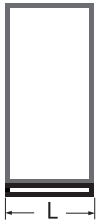
1.The total length of the unit is equal to the sum of the length of each functional segment.

2.The length of the functional segment will increase or decrease due to the structural design.

3.Special request for segment length can be made with VECK.

Functional sections instructions

Body

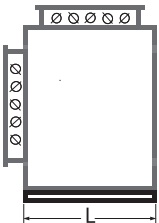


The VAC air handling unit is directly assembled from the standard module (1 mould =100mm) panel. The patented composite aluminum profile and bolt connection are adopted between the panels, and each panel can be assembled and disassembled on site.

The external surface of the standard box is silver-colored steel plate, the internal surface is hot-plated zinc plate, namely double panel structure, and the middle is flame retardant polyurethane insulation material. It is foamed and formed in the factory.

The bottom panel of the box body can bear the weight of personnel, every panel is surrounded by aluminum alloy border, the edge that two panels intersect namely has two beams or columns, that is, the box body has double frame structure, its intensity is higher than the common air handling unit, completely avoid the unit in the transportation and operation process produce the distortion;The unit is equipped with hoisting holes, and the components to be assembled in the field, such as fans, motors, cooling coils, etc.

Mixing section and air valve



1. Mixing section: Contains return air inlet and fresh air inlet, which is used to adjust the proportion of fresh air and air return, meeting the need of air adjustment.
2. Fresh and exhaust air section: the proportion of return air, fresh air and exhaust air can be adjusted to meet the need of air adjustment.
3. By-pass control: A by-pass valve is added to the upper or side parts of the box to control the amount of air passing through the coil or other equipment.
4. Air valve arrangement and structure: the air valve is an open blade equipped with a manually controlled connecting rod. If the user needs electric drive, the blade made of aluminum alloy will be driven by gear smoothly, without lubrication.
5. Size selection rule: the size design of the valve is based on 8m/s wind speed, so that the noise generated by the valve does not exceed the noise level of the unit.
6. When the air valve is installed at the top of the unit, the length of the box section determines the height of the air valve.Maximum height of the air valve = segment length -160mm; increase the height of the air valve as much as possible under the limitation of the width of the box;If the return air volume is large, the return air valve can be arranged on the end face of the unit, which can reduce the cost

Fillter section



Plate filter

The mass per unit area, resistance, mechanical performance, anti-static characteristics, moisture absorption, flame resistance, and filtration efficiency of primary-medium efficiency filters all comply with GB/T14295-2008, while high-efficiency filters comply with other relevant national standards.

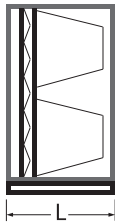
Classification:

1. Primary filter: Plate type and bag type, the filter uses chemical fiber, non - woven cloth.
2. Medium and effective filters: Plate type, bag type and dense pleat type, filter uses chemical fiber or glass fiber.
3. Sub-high efficiency filter: Bag type and dense pleat type, filter uses glass fiber.
4. High efficiency filter: Folding type, large air volume box type, filter uses glass fiber.
5. Activated carbon filter: The filter is made of various organic chemical fibers which are activated by carbonization. It is mainly used to remove the smell and low-density gas phase pollution in the air environment.

The front and back of the activated carbon filter should be equipped with a conventional filter to prevent dust from blocking the activated carbon material, and the back should be protected to prevent possible activated carbon powder pollution of the ventilation system.

Note: According to user needs

1. Choose a nylon filter screen (built-in is not recommended) and a multi-layer metal filter screen.
2. The filtering cross-sectional area of the plate and bag filters is the same, but the thickness is different. The plate thickness is 46mm, and the bag thickness is 381mm.
3. The external filter can be pulled out from the side, while the internal filter can be pulled out from the front.
4. The installation form of built-in filters is divided into slideways and frames: generally, slideways are used for comfort situations, and frames are used for purification situations.



Bag filter

Initial resistance of filter - air volume relationship diagram

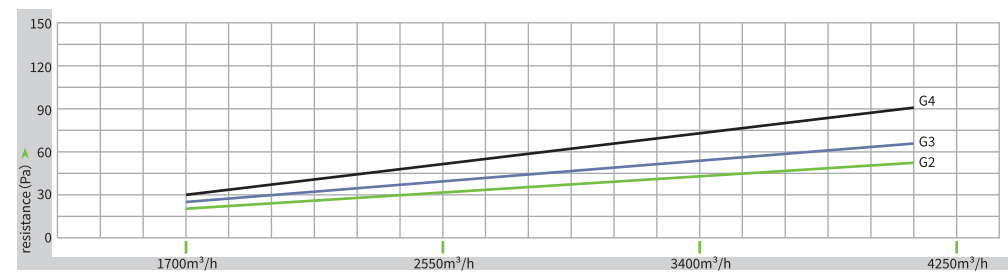
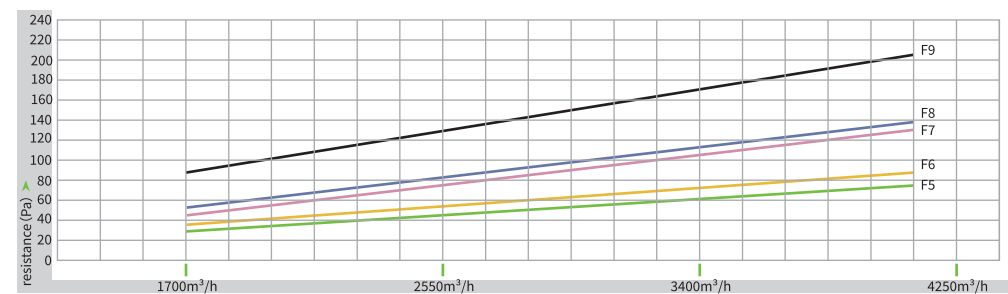


plate filter 595x595x46



bag filter 592x592x381

Filter specifications and quantity of each model

unit model		0607	0707	0609	0610	0611	0710	0711	0810	0811	0812	0813	0814	1012	1013	1014	1015	1016	1115	1116
Filter specification	24"x24"													1	2	2	2	2	2	2
	24"x12"	2	2	2	3	3	3	3	3	3	2	4	4	1	2	2	2	3	2	3
	24"x20"										1			1						

unit model		1117	1217	1218	1317	1318	1319	1419	1420	1519	1619	1521	1621	1622	1722	1624	1822	1922	1923	1924
Filter specification	24"x24"	2	2	2	4	4	6	6	6	6	6	6	6	6	6	6	6	9	9	9
	24"x12"	3	1		2	2					3		3	5	5	5	5	3	3	3
	24"x20"		2	3																

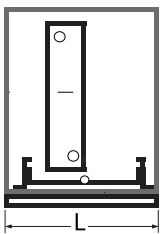
unit model		1925	2025	2026	2126	2326	2228	2528	2531	2534	2834	2838	2940	3141	3245	3546	3750	3855	4358	4565
Filter specification	24"x24"	12	12	12	12	12	12	16	20	20	20	24	24	30	35	35	42	48	63	70
	24"x12"					4	7	4		4	9	6	10	5		12	6	6		
	24"x20"																			

NOTE:
1. The table above applies only to plate and bag filters;
2. Corresponding to the nominal size 24"x 24"- 24" x 12"- 24" x 20"plate filter, the actual size (length x width x thickness,mm) is respectively : 595x595x46、595x290x46、595x493x46;
3. Corresponding to the nominal size 24"x 24"- 24" x 12"- 24" x 20"bag filter, the actual size (length x width x thickness,mm) is respectively: 592x592x381、592x287x381、592x490x381。

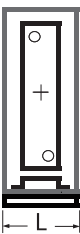
Comparison table of efficiency specifications for China, USA and Europe

China GB/T14295		primary efficiency≥5μm 80%>efficiency≥15%					medium efficiency≥1μm 70%>efficiency≥20%				high-medium efficiency≥1μm 99%>efficiency≥70%			ub-high efficiency ≥0.5μm 99.9%>efficiency≥95%				high efficiency≥0.5μm efficiency≥99.9%				
USA ASHRAE		C1	C2~C4	L5	L6	L7	L8	M9	M10	M11	M12	M13	M14	H12~H16				VH17	VH18	VH19	VH20	
Europe	New standard efficiency	G1 65%	G2 80%	G3 80~90%		G4 >90%		F5 40%		F6 60%		F7 80%	F8 90%	F9 85%	H10 95%	H11 99%	H12 99.9%	H13 99.95%	H14 99.995%		H15H17 99.9995%	
	Old specification	EU1	EU2	EU3		EU4		EU5		EU6		EU7	EU8	EU9		EU10	EU11	EU12	EU13	EU14		

Coil section



Cooling coil section



Heating coil section

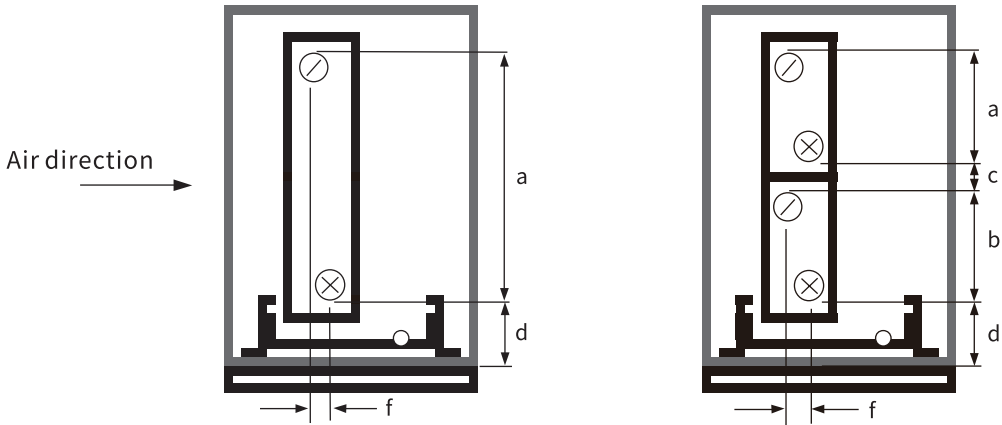
The cooling and heating coil is made of copper tube and aluminum foil, which are fixed on the copper tube by mechanical expansion process.
The fin is 8-14 pieces/inch.
The end plate of the coil is made of galvanized steel plate, and the collecting pipe is made of steel pipe.
Water supply and return pipes are standard steel pipes.
The air uniformity of the inlet section of the coil is greater than 80%.
The coil is tested at 2.8MPa in the factory and is suitable for working pressure below 1.6MPa.
The water inlet of water supply, backwater and condensation water is on the same side of the unit box;After the coil can be set up according to the user's requirements, even at high face velocity, there will not be water droplets blow out.
The water receiving plate is made of steel plate and sprayed with plastic. The outer layer is insulated to prevent condensation. The lowest point of the water receiving plate is provided with a drain pipe, which can discharge the frozen water smoothly.

Warning:When the system is shut down, the steam valve must be closed first, then the fan is turned off.

Note: depending on the needs of different users, VECK can provide the following non-standard options

- 1. The coil fin material can be made of copper foil or hydrophilic aluminum foil.
- 2. The heat exchanger end plate and drainage tray can be made of stainless steel.
- 3. Collection pipe material can be selected with copper
- 4. Coil tube can be used steel tube sheet, stainless steel tube stainless steel sheet, stainless steel tube aluminum sheet and steel tube aluminum sheet

Positioning dimensions of water pipe



Note: ⊗ inlet pipe, ⊙ tlet pipe

Circuit type	Air handling unit model	a			b			c	d			Chilled water Pipe diameter					f								Condensation waterPipe diameter		
		1/3 rows	2 rows	4/5/6/8 rows	1/3 rows	2 rows	4/5/6/8 rows		25 mm	35 mm	50 mm	1/2/3 rows	4 rows	5 rows	6 rows	8 rows	1 rows	2 rows	3 rows	4 rows	5 rows	6 rows	8 rows				
H	06XX	453	469	469					128	138	152	40	40	40	40	40	66	94	110	97	110	138	193	XX06-XX24, DN32	XX25-XX35, DN50	XX36-XX60, DN50x2	
	12XX	1024	1040	1040					128	138	152	40	65	65	65	65	66	94	110	97	110	138	193				
	15XX	1342	1358	1358					128	138	152	40	65	65	65	65	66	94	110	97	110	138	193				
	19XX	834	850	850	897	913	913	24	128	138	152	40	65	65	65	65	66	94	110	97	110	138	193				
	22XX	961	977	977	1024	1040	1040	24	128	138	152	40	65	65	65	65	66	94	110	97	110	138	193				
	25XX	1151	1167	1167	1151	1167	1167	24	128	138	152	40	65	65	65	65	66	94	110	97	110	138	193				

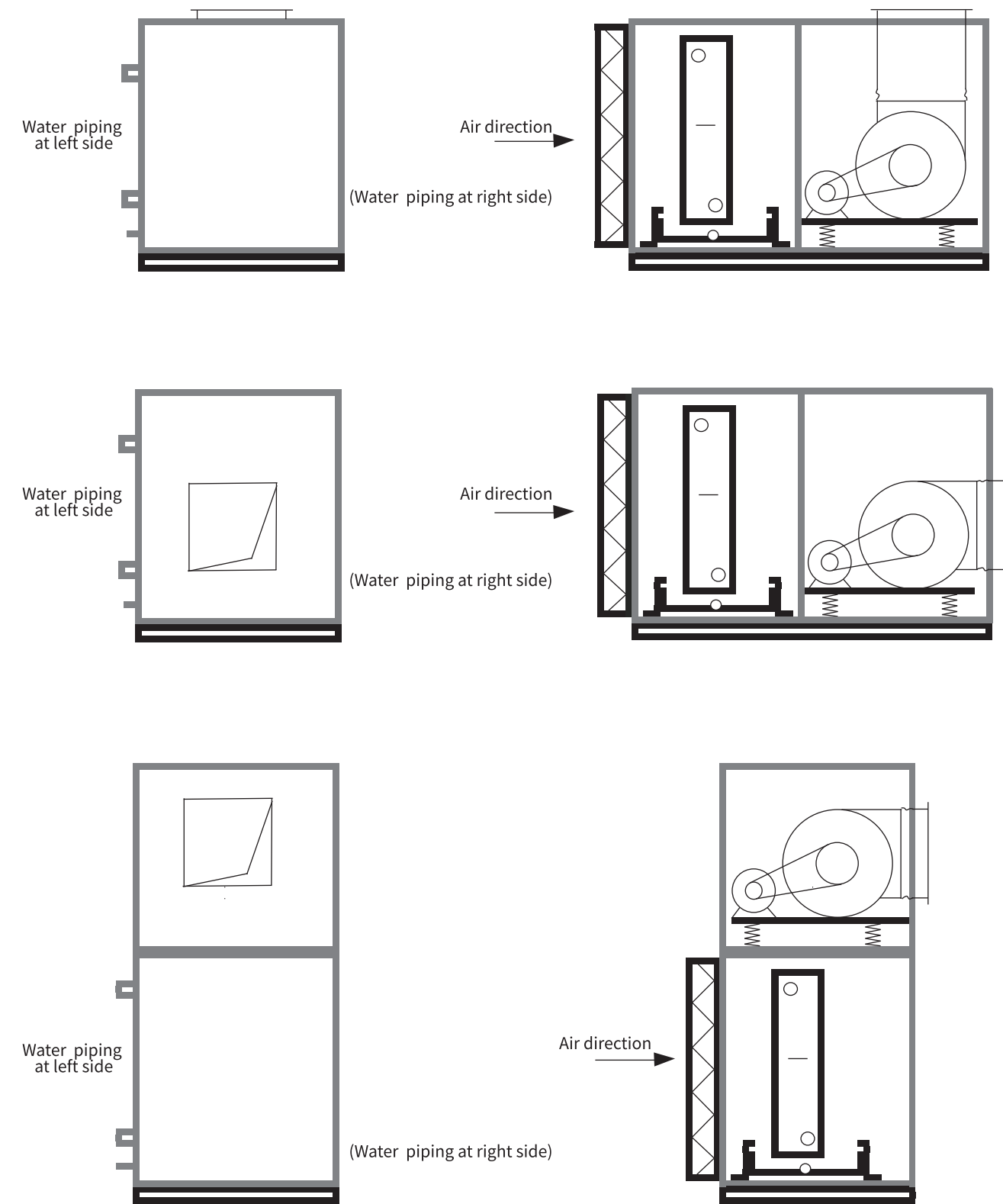
Circuit type	Air handling unit model	a		b		c	d			Chilled water Pipe diameter					f					Condensation waterPipe diameter		
		3	4/5/6/8	3	4/5/6/8		25	35	50	3	4	5	6	8	3	4	5	6	8			
		rows	rows	rows	rows		mm	mm	mm	rows	rows	rows	rows	rows	rows	rows	rows	rows	rows			
Q	06XX	453	469				128	138	152	40	40	40	40	40	66	94	116	149	205	XX06-XX24, DN32	XX25-XX35, DN50	XX36-XX60, DN50x2
	12XX	1024	1040				128	138	152	40	65	65	65	65	66	94	116	149	205			
	15XX	1342	1358				128	138	152	40	65	65	65	65	66	94	116	149	205			
	19XX	834	850	897	913	24	128	138	152	40	65	65	65	65	66	94	116	149	205			
	22XX	961	977	1024	1040	24	128	138	152	40	65	65	65	65	66	94	116	149	205			
	25XX	1151	1167	1151	1167	24	128	138	152	40	65	65	65	65	66	94	116	149	205			

Circuit type	Air handling unit model	a		b		c	d			Chilled water Pipe diameter					f					Condensation waterPipe diameter		
		3	4/5/6/8	3	4/5/6/8		25	35	50	1/2/3	4	5	6	8	3	4	5	6	8			
		rows	rows	rows	rows		mm	mm	mm	rows	rows	rows	rows	rows	rows	rows	rows	rows	rows			
P	06XX	453	469				128	138	152	40	40	40	40	40	110	94	110	138	193	XX06-XX24, DN32	XX25-XX35, DN50	XX36-XX60, DN50x2
	12XX	1024	1040				128	138	152	40	65	65	65	65	110	94	110	138	193			
	15XX	1342	1358				128	138	152	40	65	65	65	65	110	94	110	138	193			
	19XX	834	850	897	913	24	128	138	152	40	65	65	65	65	110	94	110	138	193			
	22XX	961	977	1024	1040	24	128	138	152	40	65	65	65	65	110	94	110	138	193			
	25XX	1151	1167	1151	1167	24	128	138	152	40	65	65	65	65	110	94	110	138	193			

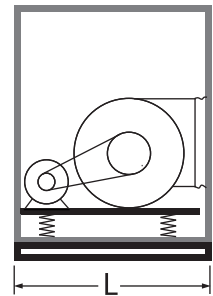
Circuit type	Air handling unit model	a	b	c	d			Chilled water Pipe diameter		f		Condensation waterPipe diameter		
		4/8rows	4/8rows		25mm	35mm	50mm	4rows	8rows	4rows	8rows			
		rows	rows		mm	mm	mm	rows	rows	rows	rows			
D	06XX	469			128	138	152	40	40	100	210	XX06-XX24, DN32	XX25-XX35, DN50	XX36-XX60, DN50x2
	12XX	1040			128	138	152	65	65	100	210			
	15XX	1358			128	138	152	65	65	100	210			
	19XX	850	913	24	128	138	152	65	65	100	210			
	22XX	977	1040	24	128	138	152	65	65	100	210			
	25XX	1167	1167	24	128	138	152	65	65	100	210			

Circuit type	Air handling unit model	a		b		c	d			Chilled water Pipe diameter				f				Condensation waterPipe diameter		
		2	4/5/6/8	2	4/5/6/8		25	35	50	2	4	6	8	2	4	6	8			
		rows	rows	rows	rows		mm	mm	mm	rows	rows	rows	rows	rows	rows	rows	rows			
F	06XX	469					128	138	152	40	40	40	40	94	97	138	193	XX06-XX24, DN32	XX25-XX35, DN50	XX36-XX60, DN50x2
	12XX	1040					128	138	152	40	65	65	65	94	97	138	193			
	15XX	1358					128	138	152	40	65	65	65	94	97	138	193			
	19XX	850		913	913	24	128	138	152	40	65	65	65	94	97	138	193			
	22XX	977		1040	1040	24	128	138	152	40	65	65	65	94	97	138	193			
	25XX	1167		1167	1167	24	128	138	152	40	65	65	65	94	97	138	193			

Water piping direction



Fan section



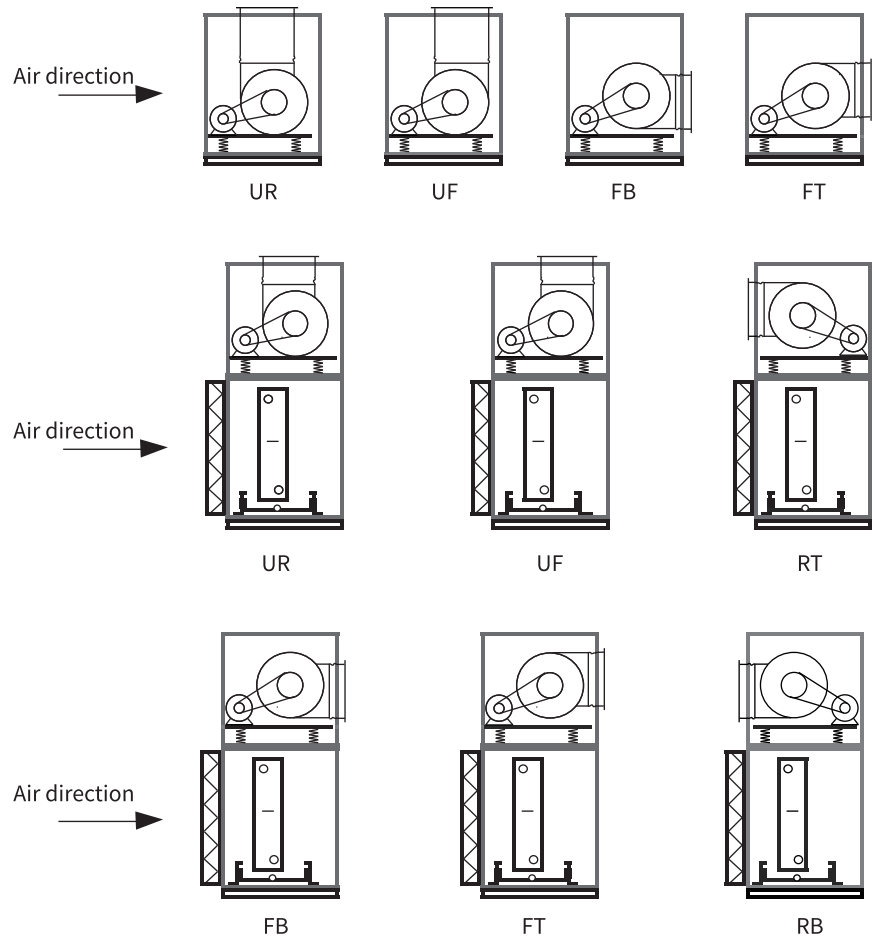
According to the difference of air volume and static pressure of air outlet, one or more centrifugal fans can be selected for fan type selection software. The fan is divided into forward curved wheel, backward curved wheel and airfoil wheel, all the housing and wheel are made of galvanized steel. All Wheels have been tested for dynamic and static balance. Ball bearings are used in all fans. They are high quality bearings and they are selected to minimize the noise levels. The bearings are pre-lubricated, sealed, and self-centering.

The motor is a fully enclosed structure with a single speed of 4 standard. The power supply is 380V/3N/50Hz and installed on the rigid track. The fan and motor are fixed on a common base and equipped with shock absorbers. The spring shock absorber is provided with a silencer and a horizontal adjusting bolt.

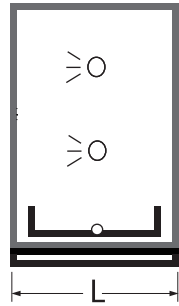
The air outlet is connected to the box using a flexible soft joint, and the fan section is equipped with an access door or a convenient disassembly access panel, which can fully pull the fan and motor out of the box.

- Note: According to user needs
1. The fan can be equipped with no volute, wing, direct connection, and single inlet
 2. The motor can be equipped with single speed 2-pole, 4-pole, 6-pole, 8-pole, dual speed, three-speed, and variable frequency motors.

Fan draught direction

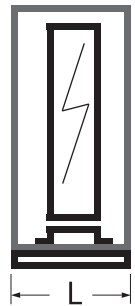


Humidification section



1. Dry steam humidifier: Isothermal humidification, made of all stainless steel, corrosion resistant, small size, easy to install, high humidification efficiency, electric control and manual control are two options, suitable for humidification occasions with steam source.
2. Electrode humidifier: Electrode humidifier use AC power to directly process the tap water to produce clean steam, microcomputer control, there are two control methods: proportional adjustment and switch adjustment. Applicable to humidification of non-steam source.
3. Wet film humidification section: The wet film material is used to absorb water. When air flows through the wet film humidifier, the water will be evaporated and gasified. The air will be purified and filtered at the same time.
4. High-pressure fog humidifier: Pressurize the tap water through the nozzle to produce tiny drops of liquid vaporized in the air and humidified. High pressure spray should be considered for humidification efficiency, generally 40-50%.

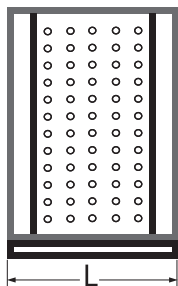
Electric heating section



The electric heating element is fixed on the frame;
The power supply is 380V/3N/50Hz;
The control cabinet is installed by the user;
The electrical heater is divided into different parts to meet the control requirements of different heating power.

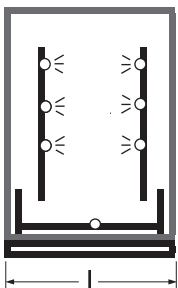
- ⚠ Warring: 1. Electric heating must be started after the fan is started;
2. Turn off the electric heating for 5 minutes before the fan stops;
3. The electric heater overheat protection switch shall be connected to the electric heating control loop.

Muffler section



According to different operating requirements and the characteristics of fan noise, this section can adopt microhole board muffler or perforated board built-in sound-absorbing cotton two ways. When the air flow passes through the perforated plate with a sound absorbent muffler, it has a good sound attenuation effect on medium and high frequency noise. The internal cavity of microorifice muffler is designed and manufactured by using the resonance sound absorption principle in physics. It has the advantages of being free from pollution and dampness, and has an effective silencing effect on low frequency and partial intermediate frequency noise. Anechoic section divides the wind anechoic sound, the air supply anechoic sound.

Spray thrower section



Spray thrower can achieve a variety of air treatment processes, not only air dehumidification, cooling, but also air humidification, and in the air flow of the passage formed a water curtain, to purify and clean the role of the air.

Heat recovery section



Runner heat recovery unit:

The heat storage member is a honeycomb structure composed of an aluminum foil substrate and a coating. It has the characteristics of heat storage, moisture absorption, heat transfer and mass transfer, and can recover sensible heat and latent heat. The total heat efficiency is up to 80%. Through the counter-current design of fresh air and exhaust air, the direction of air flow through the heat storage components changes alternately, realizing the automatic cleaning of components.

Heat medium heat recovery unit:

The medium (generally water or glycol solution) circulates in the heat exchanger of the fresh air and exhaust air system, brings the cold (hot) amount of the exhaust air back to the fresh air, and applies to the air conditioning system with small temperature difference. Only sensible heat is recovered, and the heat recovery efficiency is less than 50%.

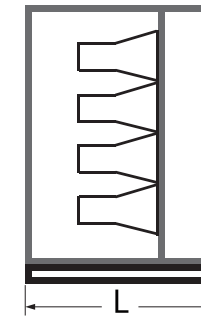
Plate heat recovery unit:

Fresh air and exhaust air exchange in plate heat exchanger. According to the different materials of heat exchanger, it can be divided into sensible heat exchanger and total heat exchanger, and the heat recovery efficiency is up to 60%. Fresh air will not be polluted by exhaust air and is suitable for various applications.

Heat pipe heat recovery unit:

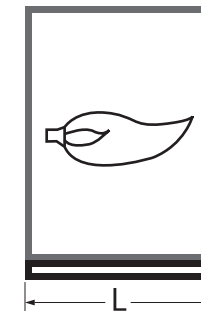
Heat pipe heat exchanger is a kind of heat transfer element by means of working medium phase change (such as ammonia, freon, etc.). Heat pipe heat exchanger has compact structure and high heat transfer efficiency.

High efficiency cartridge filter section



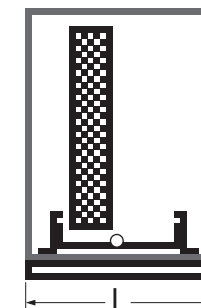
The dust capacity of the filter is very large. When the dust on the filter barrel reaches a certain level, compressed air can be used to reverse blow the filter barrel, and the dust is blown onto the air conditioning box floor for centralized cleaning. It can greatly reduce the operation cost and labor, and is very suitable for use in cigarette factories and other places with large quantity of dust.

Combustor section



Air conditioning units of natural gas directly for air conditioning heating, high thermal efficiency, low operation cost and low cost of primary investment, is very suitable for winter heating of large space rooms, such as automobile manufacturing workshop, exhibition hall, gymnasium, etc. If there is no fresh air in the air conditioning room, indirect combustion air conditioning units can be used. After burning natural gas, the high-temperature gas generated in the heat exchange pipeline heats the air in the air conditioning, not consuming the oxygen in the room, and the waste gas generated is directly discharged from the room, ensuring the air quality in the room.

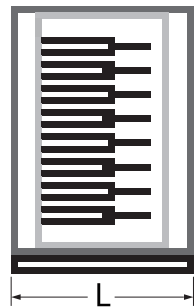
Evaporative cooler section



Spray tap water or circulating water on the wet film material to absorb heat from the air and cool the air while humidifying it. No pollution, no refrigerant, very low electricity consumption.

It is especially suitable for high temperature and low humidity.

Sterilization and purification electronic cleaning unit



Dust extraction

The dust particles passing through the electric field are ionized, and the high-voltage electrostatic field is used to make all suspended particles in the air attach positive electricity, and then they are quickly absorbed by the dust collector plate to achieve the purpose of efficient dust removal and purification. The efficiency of one-time dust removal is greater than 98.9%.

Sterilization

The discharge electrode generates plasma under high voltage. The plasma will quickly destroy and kill the nuclei of bacteria, viruses, dust mites and other microorganisms in the air. The residual materials are sintered and adsorbed by the dust collector plate. Bacteria, viruses and infectious viruses are completely eliminated through the propagation of central air conditioning system, and cross infection is completely eliminated. The one-time sterilization efficiency is greater than 94.69%

Activated carbon adsorption section



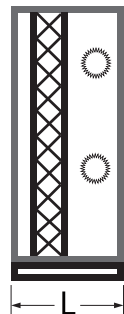
Remove peculiar smell

Activated carbon is a very small carbon granule, has a large surface area, and there are smaller pores in the granule - Capillary. These capillaries have a strong adsorption capacity, and due to the large surface area of the carbon particles, they can fully contact the gas (impurities).

Remove harmful gases such as HOHO, C6H6 and TVOC

Activated carbon Type	N4G1	N4S1	N4A1	N4B1	N4F1	N4M1
Target	General gas	Fetor	Acid gas	Alkaline gas	HCHO	Hg vapor

Photocatalyst purification section



Sterilization, deodorization, HCHO removal

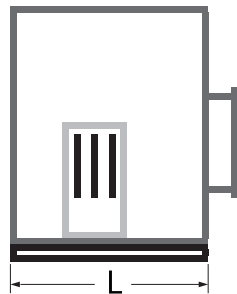
Photocatalyst is a general term of semiconductor material with photocatalytic function represented by nano TiO2. The photocatalyst produces free hydroxyl and reactive oxygen, which can destroy the cell membrane of bacteria and the protein of virus, and decompose organic pollutants (formaldehyde, benzene, etc.) under the irradiation of ultraviolet ray at a certain wavelength.

Ultraviolet-ray sterilization section



Ultraviolet ray sterilization is through the ultraviolet ray irradiation, destroy microorganism's DNA structure, make the bacterium dies immediately or cannot reproduce, in order to achieve the goal of sterilization. What really kills bacteria is UVC, because the C-band UV is easily absorbed by the organism's DNA, especially when the wavelength is around 253.7nm. Ultraviolet ray sterilization is a pure physical disinfection method, which has the advantages of simple and convenient, wide spectrum and efficient, no secondary pollution, easy management and easy automation.

Ozone Sterilization



Ozone, molecular formula O3, is easily decomposed into oxygen O2 and a single oxygen atom at room temperature, which has a strong oxidation effect. It can oxidize the enzymes necessary for the decomposition of bacteria, or directly interact with bacteria and viruses to destroy their cells and decompose their DNA, leading to the dissolution extinction of cells, parasite strains and virus particles. Ozone generator adopts the principle of gas corona discharge to generate ozone. It sterilizes and disinfects the space controlled by the whole system regularly through circulating wind. Compared with the disinfection method of chemical disinfectant, it achieves the purification effect without leaving any residual substances harmful to human body.

Purification capacity comparison

Type	Dust removal	Bactericidal	Sterilization, deodorization and HCHO
Air electronic filter	☆	☆	
Activated carbon			☆
Ultraviolet-ray		☆	
Photocatalyst purification		☆	☆
Ozone Sterilization		☆	
Plate and bag filter	☆		

Maintenance comparison of different purification and sterilization equipment

Type	Space usage	Power supply	Maintain method
Air electronic filter	3M	220V/1~ /50Hz	Clean once a year or so.
Activated carbon	Plate filter:1M Carbon cartridge filter:4M		Plate filter not cleanable, carbon cartridge filter can be refilled with activated carbon
Ultraviolet-ray	0M	220V/1~ /50Hz	No cleaning, use continuously.
Photocatalyst purification	3M	220V/1~ /50Hz	No cleaning, use continuously.
Ozone Sterilization	0M	220V/1~ /50Hz	Clean half a year or so.
Plate and bag filter	1M, 5M		Consumables

■ Weight table of major component(Fan、Motor、Drive mechanism)

Fan Model	Forward fan weight kg	Backward fan weight kg	Frame weight kg
180	10	/	17.4
200	11	/	18
225	13	/	18.6
250	22	23	19.2
280	25	26	19.8
315	31	32	21.6
355	41	44	22.8
400	53	59	25
450	67	74	28
500	77	84	30
560	126	138	86
630	176	177	100
710	220	253	109
800	289	326	124
900	384	427	180
1000	450	518	204

Motor power kW	Motor weight kg	Drive mechanism weight kg
0.37	11	3
0.55	16	3
0.75	17	3
1.1	21	4
1.5	25	5
2.2	32	7
3	36	8
4	45	14
5.5	60	20
7.5	73	23
11	116	35
15	137	42
18.5	170	56
22	186	63
30	254	84
37	308	107
45	335	124
55	450	135
75	534	163

■ Weight table of functional sections(No internal parts)

(Unit: kg)

Air handling unit model(VAC)		The body weight(No internal parts)														
		Wall thickness=25mm					Wall thickness=35mm					Wall thickness=50mm				
		End plate	300	600	900	1200	End plate	300	600	900	1200	End plate	300	600	900	1200
06	07	5	38	68	86	99	6	40	70	90	104	7	41	73	99	111
06	08	6	40	70	88	101	7	42	72	93	107	8	43	75	102	116
06	09	7	42	72	97	111	8	44	74	101	116	9	45	77	104	126
06	10	8	44	74	102	117	9	46	75	106	122	10	47	79	106	132
06	11	8	46	76	105	121	9	48	77	108	126	10	49	81	108	136
07	10	8	45	75	104	119	9	47	77	107	124	10	48	81	110	134
07	11	9	47	77	107	123	9	49	79	109	126	10	50	83	112	138
08	10	10	46	76	105	121	11	48	78	108	125	12	49	82	112	136
08	11	10	48	78	108	124	11	50	80	110	127	12	51	84	114	139
08	12	10	50	80	110	127	11	52	82	112	132	12	53	86	116	142
08	13	11	52	82	112	132	12	54	84	114	139	13	55	88	118	145
08	14	12	54	84	114	135	13	56	86	116	143	14	57	90	120	148
10	12	12	52	82	111	131	13	53	84	113	142	14	55	87	118	146
10	13	13	54	84	113	136	14	55	86	115	145	15	57	89	119	149
10	14	14	56	86	115	139	15	57	88	117	148	16	59	91	121	152
10	15	15	58	88	117	143	16	59	90	119	150	17	61	93	123	155
10	16	16	60	90	119	146	17	61	92	122	152	18	63	95	125	158
11	15	17	59	89	118	146	18	60	91	121	150	19	62	94	124	156
11	16	18	61	91	120	149	19	62	93	123	153	20	64	96	126	159
11	17	19	63	93	122	152	21	64	95	125	156	22	66	98	129	162
12	17	20	64	94	124	154	22	65	96	127	158	23	67	99	131	164
12	18	21	66	96	126	156	23	67	98	129	160	24	69	101	133	166
13	17	22	65	95	124	154	23	66	97	127	158	24	68	100	131	164
13	18	24	67	97	126	156	25	68	99	129	160	25	70	102	133	166
13	19	25	69	99	128	158	26	70	101	131	162	27	72	104	135	168
14	19	25	70	100	131	160	26	71	102	132	164	27	73	105	137	172
14	20	27	72	102	134	162	28	73	104	136	166	29	75	107	139	176
15	19	27	71	101	133	161	28	72	103	135	168	29	74	106	138	175
16	19	30	72	103	137	164	31	74	105	138	173	32	76	108	141	180
15	21	31	75	105	140	165	32	78	109	142	178	33	78	110	144	185
16	21	33	77	107	144	168	34	80	111	146	183	35	80	112	148	190
16	22	34	79	109	149	172	36	82	114	150	188	37	82	115	154	196
17	22	35	82	112	154	174	38	84	117	160	195	40	85	118	162	203
16	24	37	85	123	160	197	40	86	127	165	204	43	88	131	172	213
18	22	39	83	121	159	197	42	84	125	164	203	45	86	129	170	212
19	22	41	84	122	161	200	44	85	126	166	206	48	87	130	172	215
19	23	42	86	124	163	202	45	87	128	168	208	50	89	132	174	217
19	24	43	88	126	165	204	46	89	130	170	210	51	91	134	176	219
19	25	44	90	128	168	206	47	91	132	172	212	52	93	136	178	221
20	25	49	93	134	175	216	52	95	138	180	222	56	97	142	187	231
20	26	50	95	136	177	218	53	97	140	182	224	58	99	144	189	233
21	26	53	96	139	182	225	56	98	142	187	231	60	100	147	193	240
23	26	57	98	141	184	227	61	100	144	189	234	72	102	149	196	243
22	28	57	100	143	186	229	61	102	146	191	236	72	104	151	198	245
25	28	66	124	182	240	297	69	126	186	245	305	80	128	191	253	315
25	31	72	133	193	253	312	72	135	197	258	320	87	138	202	266	331
25	34	79	142	203	265	327	84	144	208	272	335	94	147	213	280	347
28	34	91	147	213	279	345	98	149	213	279	345	109	156	224	295	366
28	38	102	158	226	294	362	107	160	230	301	371	128	163	237	311	384
29	40	104	162	230	298	362	109	164	234	305	375	130	167	241	315	388
31	41	121	171	244	318	391	135	173	250	326	402	153	165	257	337	417
32	45	132	181	257	332	408	148	184	263	341	419	166	188	270	352	434
35	46	150	192	276	360	444	163	195	282	369	455	182	199	289	381	472
37	50	163	206	292	378	464	174	209	298	387	477	206	213	306	400	493
38	55	197	222	313	404	494	208	226	320	414	507	223	231	329	427	525
43	58	235	249	343	439	534	247	252	348	444	547	266	258	359	462	570
45	65	274	279	375	479	585	289	282	379	484	597	311	288	398	512	633

- Calculation example:
1. The weight of the surface cooling section=the weight of the corresponding box section length module of the surface cooling section+the weight of the corresponding row of coils;
 2. The weight of the fan section=the weight of the corresponding box section length modulus of the fan section+the weight of the fan+the weight of the motor+the weight of the transmission parts+the weight of the fan motor base;
 3. The total weight of the unit=the weight of each functional segment calculated based on the above two examples+the weight of the box board.

Weight table of functional sections(Only internal parts)

Air handling unit model (VAC)		Weight(kg)																				
		Mixing section Air valve	Plate filter	Bag filter	挡水板	Muffler section	Wet film humidifier (Without water)				Coil 1/2"(Without water)											
							50mm	100mm	150mm	200mm	1 row	2 row	3 row	4 row	5 row	6 row	8 row	10 row	12 row			
06	07	11	4	4	5	15	7	8	10	11	15	19	21	23	25	28	32	37	41			
06	08	11	5	5	6	18	7	9	10	11	17	22	23	25	28	31	36	41	46			
06	09	15	5	5	7	20	8	9	11	13	17	22	24	26	30	33	39	45	50			
06	10	18	6	6	8	22	8	10	11	13	17	23	26	28	32	36	43	49	55			
06	11	20	6	7	10	24	8	10	12	14	18	25	27	30	35	39	46	53	59			
07	10	18	6	7	10	26	8	10	12	14	19	26	29	32	36	40	47	54	61			
07	11	20	7	8	11	28	8	10	12	15	20	27	30	34	38	43	51	59	66			
08	10	18	7	8	12	29	9	11	13	15	23	31	34	38	43	48	57	66	74			
08	11	20	8	9	14	32	9	11	13	16	24	32	36	40	46	52	62	71	80			
08	12	22	9	10	15	35	9	12	14	17	25	34	38	43	49	55	66	76	86			
08	13	24	10	10	17	38	9	12	15	17	26	36	40	45	52	59	70	81	92			
08	14	26	10	11	19	41	10	12	15	18	27	37	42	48	55	62	75	86	98			
10	12	22	11	12	20	44	10	12	15	18	31	42	48	53	61	69	83	96	108			
10	13	24	12	13	22	48	10	13	16	19	32	44	50	56	65	73	88	102	116			
10	14	26	13	14	24	51	10	13	17	20	33	46	52	59	68	77	93	108	124			
10	15	29	14	15	26	55	11	14	17	21	34	47	55	62	72	81	99	115	131			
10	16	31	15	16	28	59	11	14	18	22	35	49	57	65	75	86	104	121	139			
11	15	29	15	17	30	61	11	15	18	22	38	53	62	70	81	92	112	130	149			
11	16	31	16	18	33	65	11	15	19	23	39	55	64	73	85	97	118	138	158			
11	17	33	17	19	35	69	12	16	20	24	40	57	67	76	89	101	124	145	166			
12	17	48	19	21	37	75	12	16	20	25	43	60	71	81	94	107	131	154	176			
12	18	51	20	22	40	79	12	17	21	26	44	62	73	84	98	112	137	161	185			
13	17	48	20	22	42	81	12	17	21	26	47	66	78	89	104	119	145	171	196			
13	18	51	22	24	45	86	13	17	22	27	48	69	81	93	109	124	152	179	206			
13	19	54	23	25	48	91	13	18	23	28	49	71	84	97	113	130	159	188	216			
14	19	54	25	27	51	98	13	18	24	29	52	74	88	102	119	136	167	197	227			
14	20	58	26	28	54	103	14	19	24	30	53	76	91	105	124	142	174	206	238			
15	19	54	26	29	56	105	14	19	25	31	56	81	96	111	130	149	183	216	249			
16	19	54	28	31	59	111	14	20	25	31	58	84	100	116	135	155	191	225	260			
15	21	61	29	32	63	116	14	20	26	33	59	86	102	119	140	161	199	235	272			
16	21	61	31	34	66	123	15	21	27	34	61	89	107	124	146	168	207	246	284			
16	22	64	33	35	69	129	15	21	28	35	63	92	110	129	151	174	215	256	296			
17	22	64	35	38	73	137	15	22	28	36	65	95	114	134	158	181	224	266	309			
16	24	70	36	39	77	141	16	23	30	37	66	97	117	138	162	187	232	276	320			
18	22	64	37	40	79	145	16	23	30	37	70	102	123	144	170	195	242	288	333			
19	22	64	39	42	85	153	16	24	31	39	75	109	132	155	182	209	260	309	358			
19	23	67	41	44	90	160	17	24	32	40	76	112	136	160	188	217	270	321	373			
19	24	70	42	46	94	167	17	25	33	42	78	115	140	165	195	225	280	333	387			
19	25	74	44	48	98	174	17	26	34	43	80	118	144	170	201	232	290	346	402			
20	25	74	46	50	102	183	18	26	35	44	82	122	149	176	208	240	299	358	416			
20	26	77	48	52	106	191	18	27	36	45	84	125	153	181	215	248	310	370	431			
21	26	77	51	55	114	200	19	28	37	47	89	132	163	193	229	264	330	395	459			
23	26	101	55	60	126	219	20	29	39	50	96	144	177	210	249	288	361	432	503			
22	28	109	57	62	128	226	20	30	40	51	95	143	177	211	250	289	363	435	507			
25	28	109	65	71	149	257	21	32	43	55	108	163	202	241	287	332	417	500	584			
25	31	122	72	78	166	284	23	35	47	60	114	174	218	261	312	362	456	548	641			
25	34	134	79	86	184	312	24	37	50	64	120	185	233	281	336	391	494	596	698			
28	34	166	88	96	209	349	26	40	55	70	135	207	262	317	379	441	559	674	789			
28	38	187	99	107	236	390	28	44	60	77	143	224	286	347	417	486	617	746	875			
29	40	198	108	117	255	425	29	46	63	81	151	237	304	370	445	519	661	800	939			
31	41	203	118	128	281	466	31	49	67	87	163	256	330	403	485	566	721	874	1027			
32	45	224	134	145	317	528	33	53	74	95	175	280	362	445	536	627	801	973	1144			
35	46	229	149	162	360	590	36	58	80	104	195	311	405	499	602	705	901	1095	1290			
37	50	250	172	186	416	678	39	64	90	116	216	349	457	565	683	801	1027	1251	1474			
38	55	276	194	211	485	766	43	72	101	131	241	393	519	645	782	918	1180	1440	1700			
43	58	291	231	251	585	914	49	82	116	151	280	461	613	764	928	1091	1406	1718	2030			
45	65	328	271	295	680	1073	54	93	131	171	311	518	694	869	1057	1246	1609	1970	2331			

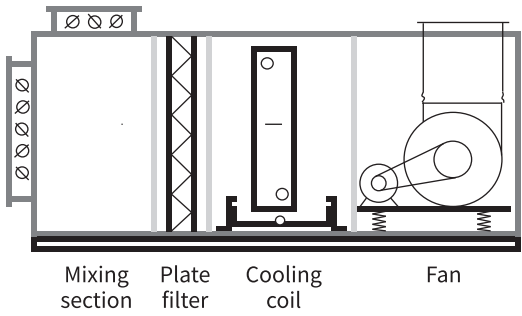
Calculation example:

1. The weight of the surface cooling section=the weight of the corresponding box section length module of the surface cooling section+the weight of the corresponding row of coils;
2. The weight of the fan section=the weight of the corresponding box section length modulus of the fan section+the weight of the fan+the weight of the motor+the weight of the transmission parts+the weight of the fan motor base;
3. The total weight of the unit=the weight of each functional segment calculated based on the above two examples+the weight of the box board.

Common function section combination method

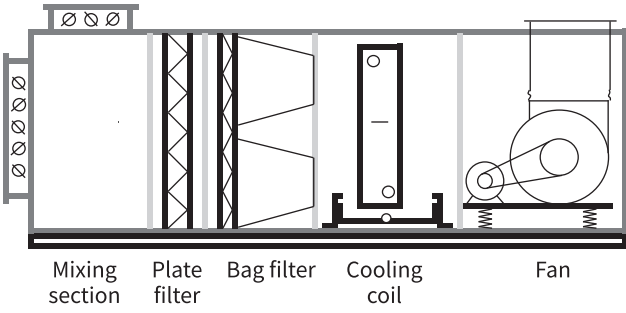
Horizontal type

H1



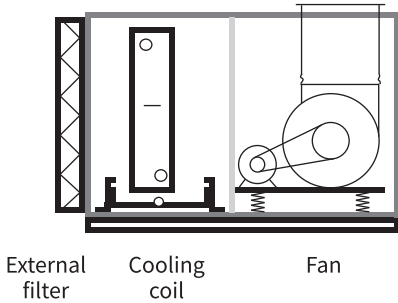
Horizontal type

H2



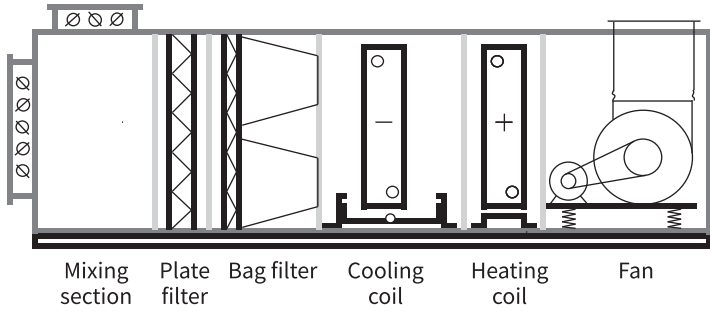
Horizontal type

H3



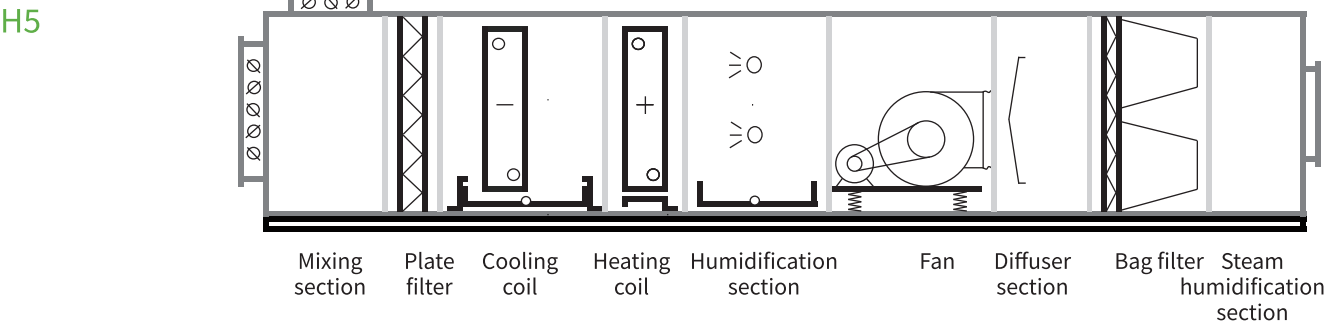
Horizontal type

H4

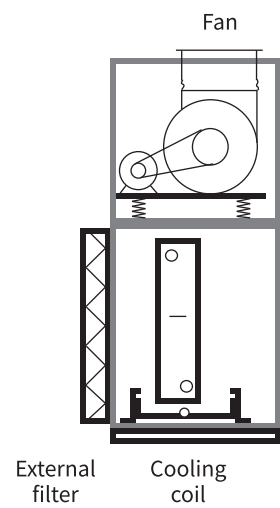


Common function section combination method

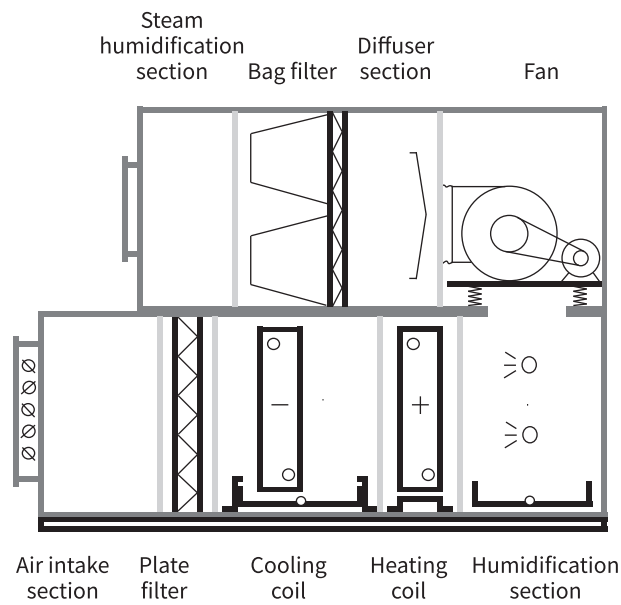
Horizontal type



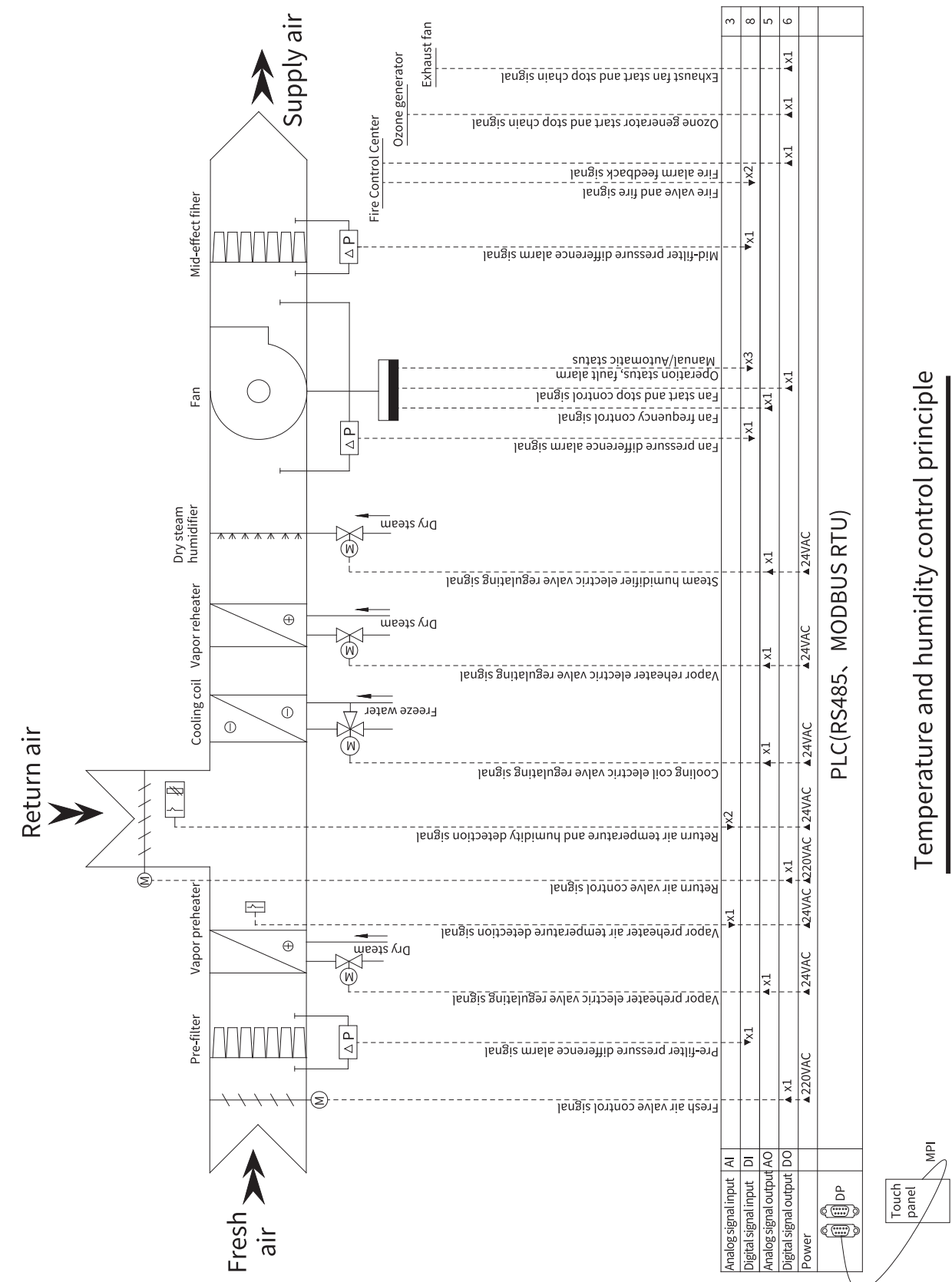
Vertical type, V1



Vertical type, V2



Control principle
Pharmaceutical factory



Temperature and humidity control principle

1. The fresh air valve of the unit is electrically adjustable, and the air valve actuator (220V switch value) is interlocked with the start and stop of the fan.
2. The initial and intermediate efficiency of the unit shall be equipped with differential pressure alarms and pressure switches.
3. Ordinary motor of the unit. Variable frequency starting, with overheating protection for the cooling fan and protection for fan loss of air.
4. The unit control cabinet is equipped with a manual/automatic switching mode for the supply fan. In automatic mode, the unit can be started and stopped by pressing the unit start button on the control cabinet operation screen, and the supply fan can be automatically started and stopped according to the working sequence; In manual mode: the supply fan can be manually started and stopped through the start/stop button on the unit control cabinet operation screen.
5. The unit control cabinet is equipped with a frequency manual/automatic selection mode. In automatic mode, the controller can receive a remote frequency setting signal from the air flow transmitter of the main air supply pipeline to meet the automatic adjustment of the unit's air supply pressure according to the controller's set value. In manual mode, the frequency of the air supply fan can be set through the frequency setting button on the control cabinet operation screen to meet the manual adjustment of the air supply volume.
6. The unit controller compares the detection values of the return air temperature and humidity sensors with the set values, and through proportional and integral calculations, adjusts the electric valve of the surface cooling coil and the electric valve of the dry steam heating coil, as well as controls the dry steam humidification proportional control valve to jointly meet the indoor temperature. Requirements for setting humidity.
7. The unit's surface cooling coil is a single cooling coil (four tube); Steam heating coils are used for both winter heating and summer dehumidification and heating.
8. The unit humidification is an external electric dry steam humidification, with a steam pressure of 0.2MPa and a 0-10V humidification analog control signal reserved.
9. In winter, the unit controls the steam preheating coil proportional control valve to meet its fresh air inlet temperature setting.
10. The unit control panel is set with "disinfection operation mode" and "disinfection exhaust mode". Check-in mode:

a. When selecting "Disinfection Operation Mode": the fresh air valve of the unit is closed, the return air valve is opened, the oxygen generator is turned on (with a reserved passive start stop contact for the oxygen generator), and the exhaust fan unit is interlocked and closed. The unit operates in full return air mode, with the supply fan motor running at low frequencies and the supply air volume being one-fourth of the rated air volume (the frequency can be set through the control panel), and the fan is in a low-speed disinfection operation state. And the operating time of the disinfection operation mode can be set according to the disinfection operation requirements (0 60min), and this mode will automatically stop after the time (and can be manually turned on or off through the operation screen button);

b. When selecting "disinfection and exhaust mode": the fresh air valve of the unit is opened. Open and close the return air valve of the ozone generator (reserve a passive dry contact for the interlock start stop of the oxygen generator), and interlock to start the exhaust fan. The unit is circulated with fresh air to remove dirty air. The low-frequency operation of the unit's supply fan motor produces a supply air volume of - quarter of the rated air volume (the frequency can be set through the control panel), and the fan is in a low-speed disinfection and exhaust state. And the operating time of the disinfection operation mode can be set according to the disinfection operation requirements (0 60min), and this mode will automatically stop after the time (# can be manually turned on or off through the operation screen button);

c. When selecting "check-in mode": the unit's supply fan motor operates at low frequencies, with a supply air volume of one fourth of the rated air volume (frequency can be set through the control panel). The fan is in a low-speed check-in state, and the surface cooling, heating, and humidification are kept at the minimum opening adjustment, only ensuring the temperature and humidity setting requirements for check-in.

11. The unit control cabinet reserves a fire damper linkage contact. When the air supply temperature reaches 70 ° C, the fire damper automatically closes and sends an interlocking signal, immediately stopping the unit operation.

12. The exhaust fan unit is interlocked with the supply fan unit, and the exhaust fan interlocking start stop contact is reserved (excluding the exhaust fan motor start circuit). When the unit is started, the supply fan is started first, and the exhaust fan is delayed to start; When the unit is shut down, first turn off the exhaust fan and then turn off the air supply

13. The control cabinet reserves a standard RS485 communication interface and opens the standard Modbus communication protocol and data address for centralized monitoring of the upper computer system (excluding the upper computer system hardware, only the communication protocol is open; if the communication address is not provided by Party A before the control cabinet leaves the factory, the communication address will be our default address).

14. It is possible to set and modify the return air temperature, humidity values, and supply air pressure, as well as display numerical values.

15. Unit control accuracy: (Temperature: 22-24 * C+1 Humidity: 45 65% ± 5).
- Control principle

Hospital
- The diagram illustrates the control principle of a hospital unit, showing the flow of air and the various control signals and components involved.

Air Flow and Components:

 - ROOM:** The main space where the unit is installed.
 - Return air:** Air drawn from the room into the unit.
 - Fresh air:** Air drawn from outside into the unit.
 - Supply air:** Air delivered from the unit back into the room.
 - Components:** Pre-filter, Cooling and heating coil, Electric heater, Electrode humidifier, Fan, Mid-effect filter.
 - Temperature and Humidity:** The unit maintains a supply air temperature of $22^{\circ}\text{C} \pm 1$ and a humidity of $55\% \pm 5$.

Control Signals and Connections:

 - Intelligence control panel signal contact:** Connects to the PLC (RS485, MODBUS RTU) for various control signals.
 - Fire Control Center:** Provides fire alarm feedback and fire signals.
 - PLC (RS485, MODBUS RTU):** The central control unit that manages the unit's operation.
 - Touch panel:** Provides a user interface for manual control and monitoring.
 - Power:** The unit is powered by 24VAC.

Control Signals (from PLC/Intelligence control panel):

 - Return air temperature and humidity detection signal (x2)
 - Pre-filter pressure difference alarm signal (x1)
 - Cooling and heating coil electric valve regulating signal (x1)
 - Anti-freezing alarm signal (x1)
 - Overheat protective signal (x1)
 - Overheat protective signal (x1)
 - Fan start and stop chain signal (x1)
 - Humidification adjustment signal (x1)
 - Fan pressure difference alarm signal (x1)
 - Fan start and stop control signal (x1)
 - Local/remote state signal (x3)
 - Operation status, fault alarm (x1)
 - Mid-filter pressure difference alarm signal (x1)
 - Fan remote start and stop control signal (x1)
 - Operation status, fault alarm (x1)
 - Local/remote state signal (x3)
 - Remote temperature and humidity setting signal (x2)
 - Remote temperature and humidity displaying signal (x2)
 - Fire valve and fire signal (x1)
 - Fire alarm feedback signal (x2)

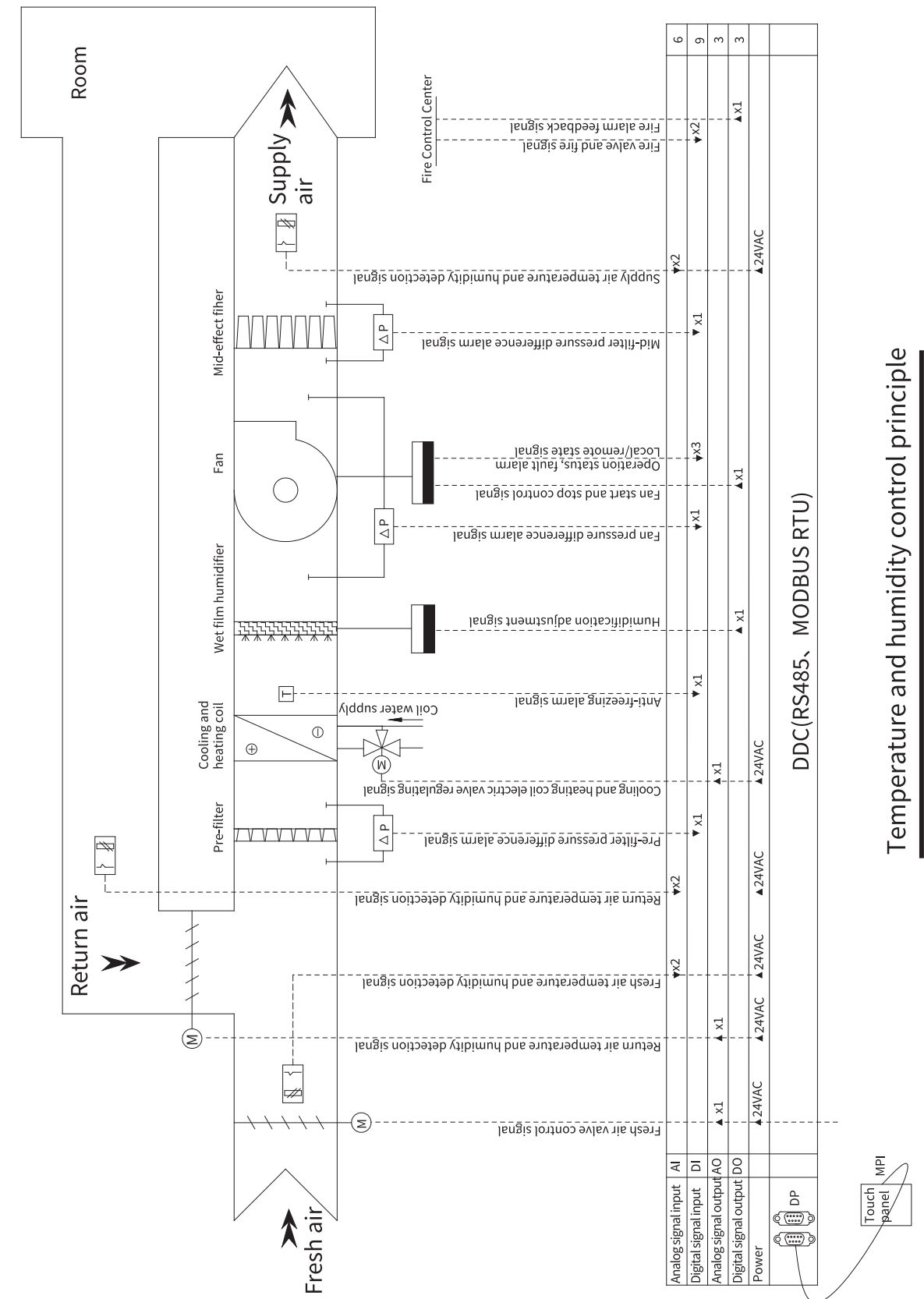
Control Signals (to PLC/Intelligence control panel):

 - Fresh air valve control signal (x1)
 - Automatic running (x1)
 - Return air temperature and humidity detection signal (x2)
 - Pre-filter pressure difference alarm signal (x1)
 - Cooling and heating coil electric valve regulating signal (x1)
 - Anti-freezing alarm signal (x1)
 - Overheat protective signal (x1)
 - Overheat protective signal (x1)
 - Fan start and stop chain signal (x1)
 - Humidification adjustment signal (x1)
 - Fan pressure difference alarm signal (x1)
 - Fan start and stop control signal (x1)
 - Local/remote state signal (x3)
 - Operation status, fault alarm (x1)
 - Mid-filter pressure difference alarm signal (x1)
 - Fan remote start and stop control signal (x1)
 - Operation status, fault alarm (x1)
 - Local/remote state signal (x3)
 - Remote temperature and humidity setting signal (x2)
 - Remote temperature and humidity displaying signal (x2)
 - Fire valve and fire signal (x1)
 - Fire alarm feedback signal (x2)
- Temperature and humidity control principle
- 25
- 26

1. The fresh air valve of the unit is electrically adjustable, and the air valve actuator (220V switch value) is interlocked with the start and stop of the fan.
2. The initial and intermediate efficiency of the unit shall be equipped with a pressure difference alarm and a pressure switch.
3. The ordinary motor of the unit can be directly started (motors with a power output greater than or equal to 1KW are star delta step-down starting, and variable frequency regulation is used when the machine is in low frequency operation), and a fan loss of air protection is installed in the well.
4. The electric heating of the unit needs to be interlocked with the fan for operation, and the fan needs to be delayed in shutdown (with a delay of 60-90 seconds).
5. The electric heating of the unit is controlled according to the above steps, and the control circuit reserves an electric heating thermal protection interlocking contact (normally closed dry contact). When the electric heating temperature is higher than 70 degrees, the heating circuit is cut off and the heating is stopped. The electric heating power supply of the well has a separate trip protection.
6. The unit control cabinet is equipped with a manual/automatic selection mode for the start and stop of the air supply fan. In automatic mode, the unit can be started and stopped through the unit switch button on the control cabinet operation screen, and the air supply fan can be automatically started and stopped according to the working sequence. In manual mode, the air supply fan can be manually started and stopped through the air supply fan start and stop button on the unit control cabinet operation screen.
7. The unit controller compares the detection values of the return air temperature and humidity sensors with the set values, and through proportional and integral calculations, adjusts the switch states of the electric valve of the surface cooling coil and the electric reheat at each level. It also controls the liquid level of the electrode humidification tank to jointly meet the indoor temperature. Requirements for setting humidity.
8. The cold coil of the unit is a shared coil with both hot and cold coils, and hot water heating is used in winter; Electric reheating is used for winter heating and summer dehumidification and heating.
9. The humidifier of the unit is electrode humidification. Analog quantity control, reserved humidification 0-10V analog quantity control signal.
10. In winter, the coil is heated by hot water. An antifreeze switch is required. When the coil temperature is below 5 ° C, an antifreeze alarm will be triggered, the fresh air valve will be closed, and the fan will be interlocked and closed. After the unit is shut down, the hot water heating electric valve will be kept open to prevent the coil from freezing and damaging.
11. Control reserved unit remote start/stop, unit operation status, unit fault status, and other dry contact signals, as well as hardwired contact signals such as temperature setting, humidity setting, temperature display, and humidity display, for use in the operating room intelligence panel. The control cabinet operation screen is set in normal operation mode/check-in mode: In check-in mode, the unit's supply fan motor operates at low frequencies, with a supply air volume of one fourth of the rated air volume (frequency can be set through the control panel). The fan is in a low-speed check-in state, maintaining the minimum opening adjustment of surface cooling, heating, and humidification, and only ensuring the temperature and humidity setting requirements for check-in.
12. The unit control cabinet reserves a fire damper linkage contact. When the air supply temperature reaches 70 ° C, the fire damper automatically closes and sends an interlocking signal, immediately stopping the unit operation.
13. The exhaust fan unit is interlocked with the supply fan unit, and the exhaust fan interlocking start stop contact is reserved (excluding the exhaust fan motor start circuit). When the unit is started, the supply fan is started first and the exhaust fan is delayed to start; When the unit shuts down, first turn off the exhaust fan and then turn off the supply fan.
14. The control cabinet reserves a standard RS485 communication interface and opens the standard Modbus communication protocol and data address for centralized monitoring of the upper computer system (excluding the upper computer system hardware, only the communication protocol is open; if the communication address is not provided by Party A before the control cabinet leaves the factory, the communication address will be our default address).
15. It is possible to set and modify the return air temperature and humidity values, as well as display numerical values.
16. Unit control accuracy: (Temperature: 22-249C ± 1 Humidity: 45-65% ± 5).

Control principle

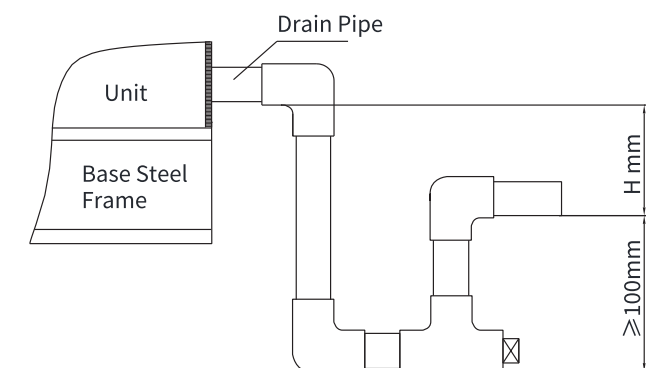
Comfort setting



Temperature and humidity control principle

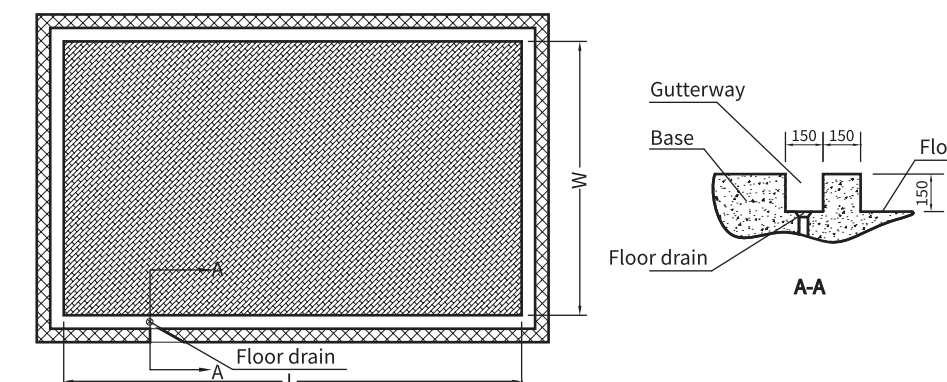
1. The fresh air valve and return air valve of the unit are electrically adjustable, and the air valve actuator (24V analog adjustment) is interlocked with the start and stop of the fan. Its opening can be set through the control panel.
2. The initial and intermediate efficiency of the unit shall be equipped with pressure difference alarms and pressure difference switches.
3. The ordinary motor of the unit can be directly started (motors with a power output greater than or equal to 11KW are star delta step-down starting), and a fan loss of wind protection is installed.
4. The unit control cabinet is equipped with a manual/automatic selection mode for the start and stop of the air supply fan. In automatic mode, the unit can be started and stopped through the unit switch button on the control cabinet operation screen, and the air supply fan can be automatically started and stopped according to the working sequence. In manual mode, the air supply fan can be manually started and stopped through the air supply fan start and stop button on the unit control cabinet operation screen.
5. The unit controller compares the detection values of the return air temperature and humidity sensors with the set values, adjusts the electric valve of the surface cooling coil through proportional and integral calculations, and jointly meets the setting requirements of indoor temperature and humidity by controlling the switch status of the vaporization humidification solenoid valve.
6. The cold coil of the unit's surface is a shared cold and hot coil (two pipe), which is heated with hot water in winter.
7. The humidifier of the unit is vaporized humidification, with on-off control and reserved humidification on/off control signal.
8. In winter, when the coil is heated by hot water, an antifreeze switch needs to be installed. When the temperature of the coil is below 5 °C, an antifreeze alarm will be triggered, the fresh air valve will be closed, and the fan will be interlocked and closed. After the unit is shut down, the electric valve for hot water heating will be kept open to prevent the coil from freezing and damaging.
9. The unit control cabinet reserves a fire damper linkage contact. When the air supply temperature reaches 70 °C, the fire damper automatically closes and sends an interlocking signal, immediately stopping the unit operation.
10. The control cabinet reserves a standard RS485 communication interface and opens the standard Modbus communication protocol and data address for centralized monitoring of the upper computer system (excluding the upper computer system hardware, only the communication protocol is open; if the communication address is not provided by Party A before the control cabinet leaves the factory, the communication address will be our default address).
11. It is possible to set and modify the return air temperature and humidity values, as well as display the values of fresh air temperature and humidity, return air temperature and humidity, and supply air temperature and humidity.
12. Unit control accuracy: (temperature: 18-26 °C ± 2 humidity: 45-65% ± 10).

Installation



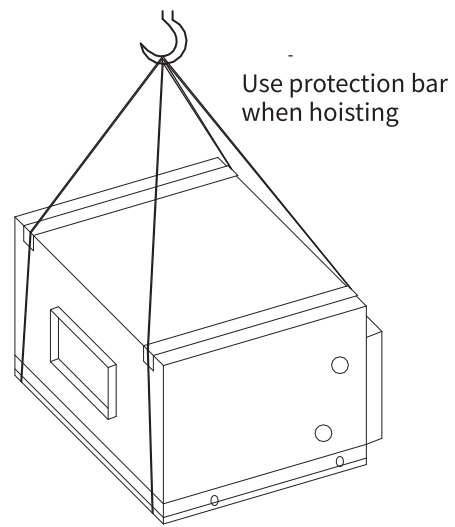
In the figure, H= internal negative pressure (unit :mm H₂O)+20
 Note: The unit conversion of negative pressure in the machine after the coil at the water seal position is 1mmH₂O=10Pa
 Unit conversion: 1mmH₂O=10Pa

- All types of air conditioning units should be installed on a level foundation.
- Adequate space should be left around the unit, especially on the side of the access door of the unit piping, fan and motor, to facilitate the daily inspection and regular maintenance of the unit.
- The condensate water outlet must be connected with a U-shaped water seal before it is connected to the outer pipe.
- When connecting the inlet and outlet pipe of the coil pipe, should be balanced force, do not force too hard, so as to avoid damage to the coil
- The motor of the air conditioning unit shall be connected to the power supply with overload protection and with ground protection.
- Flexible connection should be adopted between air conditioning unit and external air duct to avoid vibration transmission.



Notes: 1. The foundation of the unit is concrete.
 2. "W"= Unit width +200mm
 "L"= Unit Length +200mm

■ Installation



The performance of the crane or forklift used for unit transportation and the handling tools must meet safety requirements, and the quality and transportation methods must comply with local laws and regulations to avoid accidents. Special attention should be paid to the level of the unit or packaging box during transportation and lifting to avoid unnecessary damage to various components. The unit or packaging box has forklift loading and unloading ports and lifting holes left before leaving the factory. When lifting, the method shown in the diagram must be followed to avoid danger or damage to the unit. When lifting, the area where the steel rope comes into contact with the box should be padded with materials such as hard paper to prevent the steel rope from abrading the unit.

■ Correct use of the unit

- Each time before running the unit, it should check the water pipe and air pipe valves, and make them in normal operation state.
- The connection, operation and transmission of fan, motor and other moving parts should be checked regularly and adjusted in time.
- The primary filter should be cleaned with water or cleaning agent according to the degree of dirt, and the frequency of cleaning depends on the environment used.
- When the resistance of medium filter rises to twice of the primary resistance, it should be cleaned or replaced.
- When the unit is not running in winter, the water in the coil should be discharged; When the unit continues to run in winter and stops for a short time, the continuous flow of water in the coil must be maintained and the fresh air valve closed to avoid freezing the coil. If the unit stops for a long time, the water in the coil should be discharged
- Cold and hot water should be clean and softened. Every two years of operation of the unit, the scale inside the coil should be removed by chemical method, and the dirt on the surface of the fin should be cleaned with compressed air or water.
- Ensure that the steam coil closes the steam valve before the fan stops.
- Ensure that the steam humidifier closes the steam valve before the fan stops.
- The electric heater must be turned on only after the fan is turned on. Turn off the electric heater five minutes before the fan stops. The electric heater overheating protection switch must be connected to the electric heater protection circuit.
- The power line of the unit shall be made of three - phase five - wire system. When the electric heater phase line diameter is less than or equal to 35 mm, the zero line diameter is the same as the phase line diameter. When the phase line diameter greater than 35mm, the zero line diameter is half of the phase line diameter, and the diameter of the zero line should not be less than 35mm.