



Air Handling Units(Cabinet, T Series)
2000-50000m³/h



ISO9001 ISO14001 OHSAS18001

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www.mammothchina.com

Mammoth dedicates to continuous improvement of products and unit parameters are subject to change without notice.



Since 1988, Mammoth has been providing energy saving products to projects in China. In 2002, Mammoth invested US\$10 million to establish its manufacturing facility in Anji, China's #1 Ecological County, and its national sales headquarter in Shanghai to provide custom engineered air conditioning systems for projects in China and abroad.



Mammoth produces air conditioning equipment that leverages energy saving and innovative technologies. Our products include, but not limited to, geothermal & water source heat pumps, air & water cooled commercial air conditioning units, fan coils, AHU, VAV box, screw chillers, and energy recovery units.



Mammoth has been recognized as a leader in providing custom designed Total Energy Solution HVAC Systems. Our solutions can fit any design applications from WSHP systems to geothermal systems, from hybrid systems to various energy saving systems. Based on the needs of our customers, our recommendations help our customers assess the economic benefits of Mammoth solutions over alternative systems.



Mammoth has also brought its innovative design concepts to the industry. We have printed numerous technical design manuals and books to facilitate engineers in the design of Renewable Energy HVAC Systems. Together with industry associations and the commercial section of the US Embassy and Consulate General Offices, we have frequently conducted technical seminars in major cities in China and abroad. We have supplied our solutions to projects that amount to almost 10 million sq. m., and have been continuously recognized as the leader in Renewable Energy products in China.



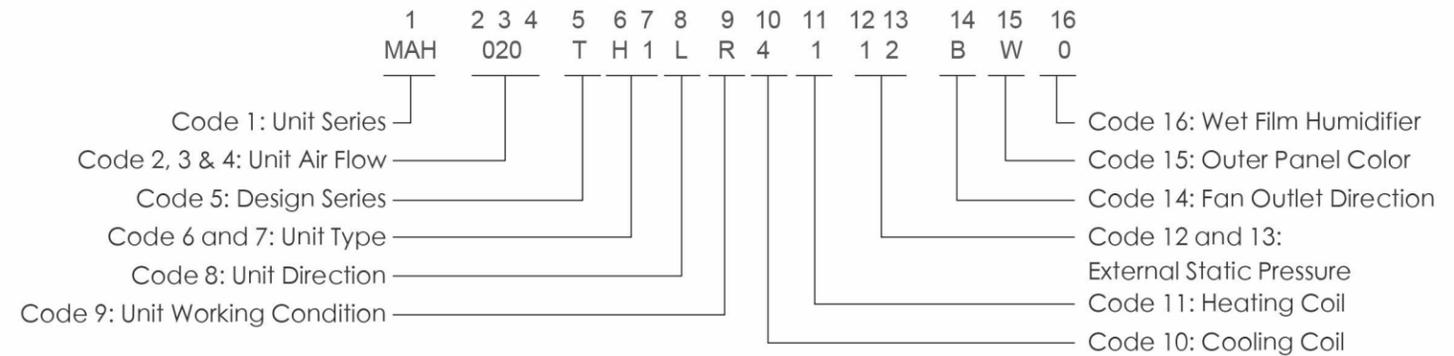
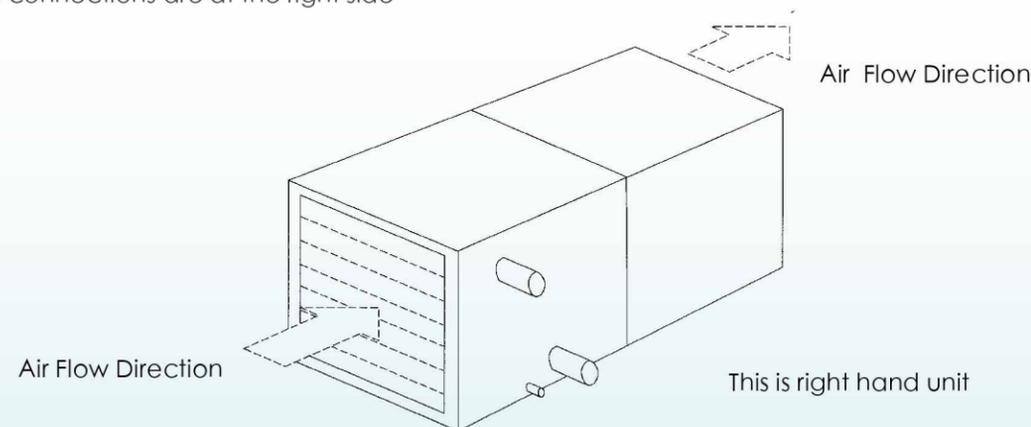
Since 1935, Mammoth has been producing and installing air conditioning units with the most innovative technologies. Our solutions are found in some of the world's most important buildings for its unparalleled flexibility and efficiency. When performance and energy efficiency are important factors to a project, our products are often chosen as the final solution.

Mammoth MAH series AHU utilizes inner and outer frame structure, with features of low air leakage, high strength, and no cold bridge. According to its combination and structure, units can be divided into 7 types: horizontal type one through six and vertical type one. Unit air flow ranged from 2000 through 5000 m³/h, with various optional ESP. Unit has compact cabinet size, excellent performance and multiple options like hot water coil and wet film humidifier.



Unit Right Hand or Left Hand Judgement

Face to unit return air side, for left hand unit, pipe connections are at the left side, for right hand unit, pipe connections are at the right side



Code 1

Unit Series:
Mammoth AHU - Panel Thickness 25mm

Code 2, 3, 4

Unit Air Flow
020-500 (*100m³/h)

Code 5

Design Series

Code 6, 7

H2 - Horizontal Type 2; H3 - Horizontal Type 3; H4 - Horizontal Type 4; H5 - Horizontal Type 5; H6 - Horizontal Type 6;

Code 8

Unit Direction L- left, R - Right

Code 9

Unit Working Condition R - Return Air F - Fresh Air

Code 10

Cooling Coil
4-4 Rows
If not available, use N

Code 11

Hot Water Coil
1- 1 Row
If not available, use N

Code 12, 13

External Static Pressure
*10Pa

Code 14

Fan Outlet Direction (standard UF)

Note: Fan outlet direction is optional for horizontal units, consult Mammoth for customized requirement

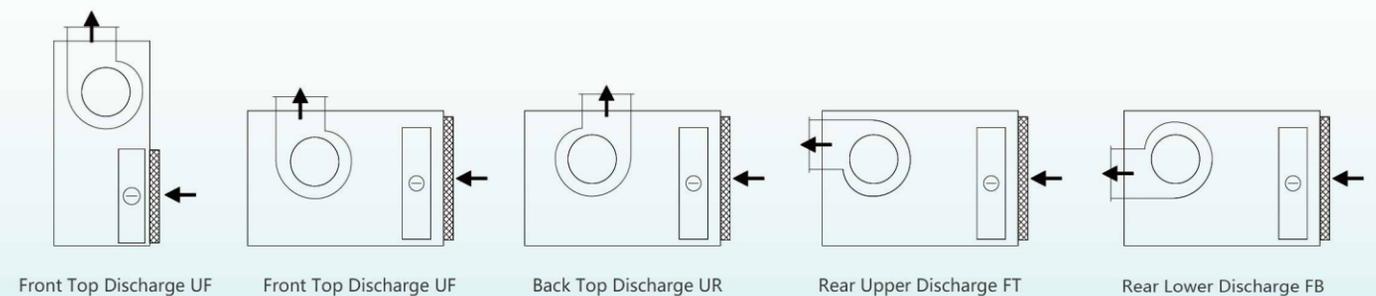
Code 15

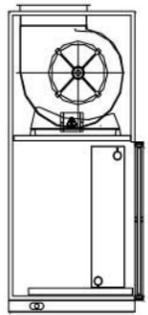
Outer Panel Color W - white (standard)

Code 16

Wet Film Humidifier 0 - None 1-50mm 2- 100mm

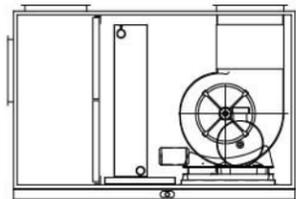
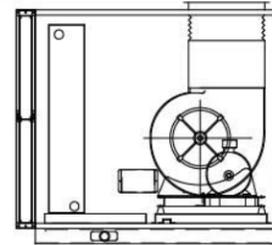
Unit Leaving Air Direction





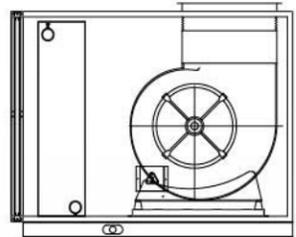
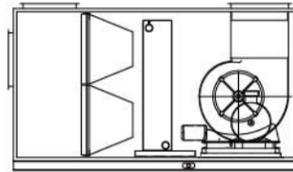
Vertical Standard 1
Outer Nylon Filter + Chilling Coil + Fan

Horizontal Standard 1
Outer Nylon Filter + Chilling Coil + Fan



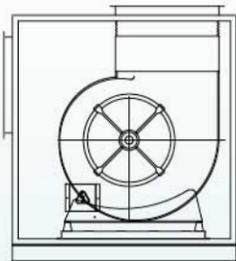
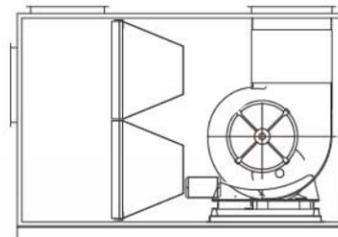
Horizontal Standard 2
Outer Nylon Filter + Hot Water Heating + Fan

Horizontal Standard 3
mixing + primary filter + medium filter + chilling coil + fan



Horizontal Standard 4
Outer Nylon Filter + Hot Water Heating + Fan

Horizontal Standard 5
Mixing + Primary Filter + Medium Filter + Fan



Horizontal Standard 6
Air Entering + Fan

Note:
1, vertical standard 1 (V1), horizontal standard 1 (H1), horizontal standard 8 (H8) incorporated with nylon filter, optional with primary plate type filter;
2, wet film humidifier is optional after the chilling coil;
3, hot water coil is optional after the chilling coil;
4, standard primary filter is G3 plate type and medium filter is M5 bag type.

Standard Working Condition

Model	Air Flow	4Rows						6Rows						Noise Level
		Cooling Capacity	Heating Capacity	Water Flow	Water Pressure Drop	Load Water Pipe Size	Condensing Water Pipe Size	Cooling Capacity	Heating Capacity	Water Flow	Water Pressure Drop	Load Water Pipe Size	Condensing Water Pipe Size	
MAH	m ³ /h	kW	kW	l/s	kPa	DN	DN	kW	kW	l/s	kPa	DN	DN	dB(A)
020	2000	11.0	22.8	0.5	17.4	32	25	14.8	27.6	0.7	44.8	32	25	55.0
030	3000	17.2	35.1	0.8	28.7	32	25	22.7	41.9	1.1	71.6	32	25	58.0
040	4000	23.4	47.1	1.1	45.3	32	25	29.6	54.6	1.4	34.8	32	25	59.0
050	5000	28.2	57.0	1.3	38.9	32	25	34.5	64.5	1.6	30.3	32	25	61.0
060	6000	35.1	69.1	1.7	59.5	40	25	42.4	78.2	2.0	40.3	40	25	62.0
070	7000	41.0	80.7	2.0	72.1	50	25	48.8	92.5	2.3	50.0	50	25	64.0
080	8000	48.2	93.7	2.3	38.5	50	25	57.2	106.7	2.7	74.7	50	25	64.0
090	9000	52.3	102.6	2.5	35.8	50	25	65.1	120.6	3.1	75.7	50	25	65.0
105	10500	59.7	115.7	2.8	50.6	50	25	74.2	138.1	3.5	48.8	50	25	66.0
120	12000	69.8	136.8	3.3	73.4	50	25	89.9	165.3	4.3	75.6	50	25	67.0
135	13500	79.1	158.1	3.8	48.2	65	32	104.1	187.7	5.0	39.0	65	32	68.0
150	15000	90.4	172.7	4.3	49.1	65	32	115.0	207.6	5.5	38.1	65	32	68.0
180	18000	107.0	210.8	5.1	66.4	65	32	136.4	247.2	6.5	51.2	65	32	69.0
210	21000	126.6	247.3	6.0	85.3	65	32	157.4	289.4	7.5	62.0	65	32	70.0
240	24000	148.8	285.6	7.1	39.0	65	32	181.9	332.2	8.7	84.0	65	32	71.0
270	27000	167.5	321.3	8.0	43.0	65	32	204.7	372.0	9.8	85.5	65	32	72.0
300	30000	186.1	357.0	8.9	43.5	65	32	226.1	413.4	10.8	39.0	65	32	73.0
330	33000	204.7	392.7	9.8	58.0	80	32	253.0	456.8	12.1	52.0	80	32	73.0
350	35000	220.1	416.5	10.5	66.5	80	32	271.3	486.9	12.9	59.5	80	32	73.5
400	40000	230.8	451.0	11.0	69.2	80	32	299.8	546.1	14.3	52.5	80	32	73.5
450	45000	248.1	484.8	11.8	71.5	80	32	341.1	617.2	16.3	59.8	80	32	74.0
500	50000	275.6	538.5	13.1	79.1	80	32	379.0	685.9	18.1	65.9	80	32	74.0

Notes:
1, cooling capacities are based on 27deg.C DB / 19.5deg.C WB entering air and 7 / 12 deg.C entering / leaving water. Heating capacities are based on 15 deg.C entering air and 60deg.C entering water and same water flow with cooling
2, noise data are for vertical units, it varies with unit ESP.
3, capacities will be different if fresh air is increased, consult Mammoth for its change.

Fresh Air Condition

Model	Air Flow	4Rows						6Rows						Noise Level
		Cooling Capacity	Heating Capacity	Water Flow	Water Pressure Drop	Load Water Pipe Size	Condensing Water Pipe Size	Cooling Capacity	Heating Capacity	Water Flow	Water Pressure Drop	Load Water Pipe Size	Condensing Water Pipe Size	
MAH	m ³ /h	kW	kW	l/s	kPa	DN	DN	kW	kW	l/s	kPa	DN	DN	dB(A)
020	2000	27.4	30.7	1.3	31.8	40	25	33.7	34.2	1.6	66.5	40	25	55.0
030	3000	40.5	44.3	1.9	44.0	40	25	47.9	48.9	2.3	89.6	40	25	58.0
040	4000	54.7	58.8	2.6	62.5	50	25	63.8	67.0	3.0	55.8	50	25	59.0
050	5000	68.4	73.8	3.3	64.3	50	25	79.8	83.9	3.8	53.5	50	25	61.0
060	6000	81.0	85.0	3.9	78.3	50	25	97.9	100.5	4.7	74.9	50	25	62.0
070	7000	89.6	95.0	4.3	40.5	65	25	115.4	116.7	5.5	31.4	65	25	64.0
080	8000	101.7	108.6	4.9	57.7	65	25	127.7	134.5	6.1	42.8	65	25	64.0
090	9000	116.8	123.5	5.6	58.5	65	25	140.5	146.7	6.7	40.7	65	25	65.0
105	10500	132.8	154.9	7.0	78.6	65	25	162.1	167.3	7.7	60.0	65	25	66.0
120	12000	157.9	175.3	7.5	82.7	65	25	193.6	196.5	9.2	89.0	65	25	67.0
135	13500	172.8	195.2	8.2	27.2	80	32	222.6	223.1	10.6	61.5	80	32	68.0
150	15000	194.7	221.3	9.3	27.8	80	32	252.6	252.3	12.0	62.8	80	32	68.0
180	18000	230.5	257.6	11.0	37.5	80	32	293.6	296.1	13.1	74.4	80	32	69.0
210	21000	276.3	303.6	13.2	51.5	80	32	331.5	336.1	13.9	83.2	80	32	70.0
240	24000	319.9	348.8	15.2	73.2	80	32	*366.2	*380.6	*12.5	80.0	80	32	71.0
270	27000	359.9	389.7	17.1	76.5	80	32	*409.6	*428.2	*13.9	82.0	80	32	72.0
300	30000	384.1	420.5	18.3	70.0	80	32	*455.2	*473.6	*15.5	80.0	80	32	73.0
330	33000	445.7	482.0	21.2	87.5	80	32	*503.6	*523.3	*17.1	84.0	80	32	73.0
350	35000	454.3	490.5	21.6	76.5	80	32	*552.5	*578.3	*15.5	83.9	80	32	73.5
400	40000	477.1	525.2	22.7	40.3	80	32	*589.3	*622.5	*18.7	*83.5	80	32	73.5
450	45000	536.7	594.2	25.6	45.3	80	32	*647.2	*679.6	*19.3	*79.8	80	32	74.0
500	50000	605.1	663.9	28.8	51.6	80	32	*727.9	*774.6	*21.7	*89.9	80	32	74.0

Notes:

- 1, cooling capacities are based on 27deg.C DB / 19.5deg.C WB entering air and 7 / 12 deg.C entering / leaving water. Heating capacities are based on 15 deg.C entering air and 60deg.C entering water and same water flow with cooling
- 2, noise data are for vertical units, it varies with unit ESP.
- 3, capacities will be different if fresh air is increased, consult Mammoth for its change.

Standard Condition (4 pipes heating coil)

Model	Air Flow	1Rows				2Rows			
		Heating Capacity	Water Flow	Water Pressure Drop	Pipe Diameter	Heating Capacity	Water Flow	Water Pressure Drop	Pipe Diameter
MAH	m ³ /h	kW	l/s	kPa	DN	kW	l/s	kPa	DN
020	2000	6.7	0.2	0.2	32	13.6	0.3	1.2	32
030	3000	10.2	0.3	0.3	32	20.0	0.5	2.0	32
040	4000	13.8	0.3	0.5	32	27.2	0.7	3.0	32
050	5000	18.5	0.5	0.5	32	35.8	0.9	3.3	32
060	6000	23.2	0.6	0.7	32	43.7	1.1	4.3	32
070	7000	27.6	0.7	0.9	32	50.9	1.2	5.1	32
080	8000	32.5	0.8	1.3	32	56.8	1.4	6.4	32
090	9000	37.0	0.9	1.3	32	64.4	1.6	6.5	32
105	10500	42.0	1.0	1.8	32	77.7	1.9	10.3	32
120	12000	48.7	1.2	2.5	32	88.8	2.2	14.2	32
135	13500	56.4	1.4	3.7	40	101.5	2.5	20.4	40
150	15000	61.7	1.5	3.9	40	111.0	2.7	21.1	40
180	18000	75.2	1.8	5.4	40	135.3	3.3	29.2	40
210	21000	88.9	2.2	7.0	40	157.8	3.9	37.5	40
240	24000	103.1	2.5	10.2	40	174.7	4.3	7.7	40
270	27000	116.0	2.8	10.3	40	196.5	4.8	7.8	40
300	30000	128.8	3.1	10.4	40	216.5	5.3	7.7	40
330	33000	141.7	3.5	13.4	40	240.1	5.9	10.1	40
350	35000	150.3	3.7	15.6	40	254.7	6.2	11.7	40
400	40000	167.0	4.1	13.9	40	281.5	6.9	10.4	40
450	45000	187.9	4.6	15.3	40	322.1	7.9	11.8	40
500	50000	208.8	5.1	16.7	40	357.9	8.7	12.8	40

Note:

Heating capacities are based on 15deg.C entering air, 60 / 50 deg.C entering / leaving water

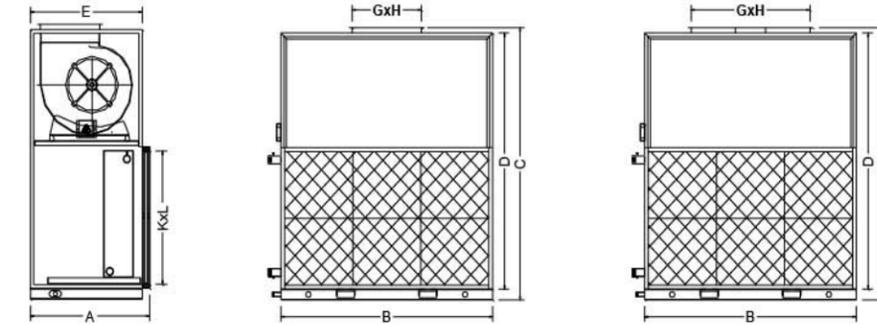
Fresh Air Condition (4 Pipes Heating Coil)

Model	Air Flow	1Rows				2Rows			
		Heating Capacity	Water Flow	Water Pressure Drop	Pipe Diameter	Heating Capacity	Water Flow	Water Pressure Drop	Pipe Diameter
MAH	m³/h	kW	l/s	kPa	DN	kW	l/s	kPa	DN
020	2000	9.0	0.2	0.3	32	16.6	0.4	1.7	32
030	3000	13.5	0.3	0.5	32	25.7	0.6	3.1	32
040	4000	18.6	0.5	0.8	32	33.2	0.8	4.2	32
050	5000	23.2	0.6	0.8	32	43.6	1.1	4.6	32
060	6000	28.7	0.7	1.0	32	50.6	1.2	5.5	32
070	7000	33.9	0.8	1.3	32	63.0	1.5	7.2	32
080	8000	39.9	1.0	1.9	32	73.1	1.8	10.5	32
090	9000	45.5	1.1	1.8	32	78.4	1.9	9.1	32
105	10500	51.6	1.3	2.5	32	92.9	2.3	14.0	32
120	12000	59.0	1.4	3.5	32	106.2	2.6	19.2	32
135	13500	69.2	1.7	5.3	40	123.3	3.0	28.4	40
150	15000	75.9	1.9	5.5	40	134.9	3.3	29.5	40
180	18000	92.3	2.3	7.6	40	161.9	3.9	39.7	40
210	21000	109.2	2.7	10.0	40	182.9	4.5	7.4	40
240	24000	124.8	3.0	14.1	40	212.4	5.2	10.7	40
270	27000	140.4	3.4	14.3	40	237.1	5.8	10.7	40
300	30000	156.0	3.8	14.4	40	261.3	6.4	10.7	40
330	33000	173.9	4.2	19.0	40	292.1	7.1	14.1	40
350	35000	184.4	4.5	22.1	40	309.8	7.6	16.4	40
400	40000	202.3	4.9	19.2	40	342.8	8.4	14.5	40
450	45000	227.6	5.6	21.2	40	385.7	9.4	16.0	40
500	50000	256.1	6.2	23.6	40	423.6	10.3	17.1	40

Note:
Heating capacities are based on 15deg.C entering air, 60 / 50 deg.C entering / leaving water

Vertical Standard Unit 1

Outer Nylon Filter + Chilling Coil + Fan

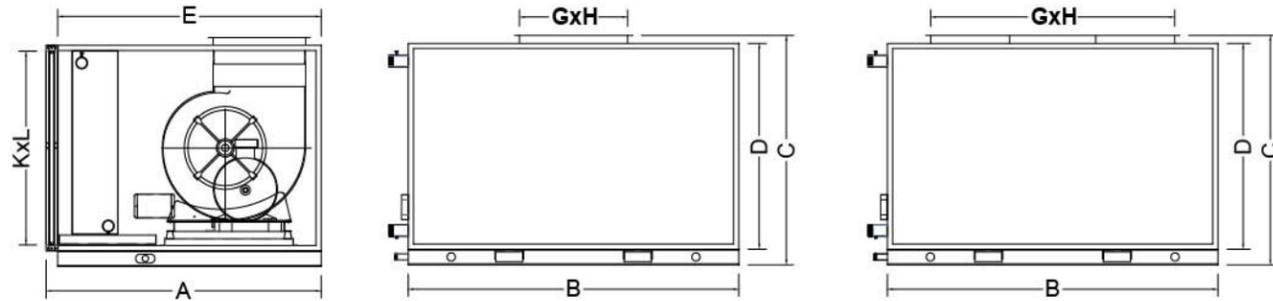


Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4Rows	6Rows
020	640	900	1120	1000	580	232	262	840	390	137	143
030	640	1000	1220	1100	580	298	262	940	490	153	160
040	640	1100	1320	1200	580	331	289	1040	550	175	183
050	720	1100	1520	1400	660	309	341	1040	700	206	216
060	720	1200	1620	1500	660	395	341	1140	750	231	244
070	800	1200	1720	1600	740	373	404	1140	800	257	272
080	800	1400	1720	1600	740	373	404	1340	800	272	289
090	930	1400	1920	1800	870	430	478	1340	900	326	344
105	930	1600	1920	1800	870	430	478	1540	900	360	376
120	930	1700	1920	1800	870	557	478	1640	900	367	394
135	930	2000	1920	1800	870	1040	404	1940	900	481	518
150	930	2000	2020	1900	870	1040	404	1940	1000	491	520
180	960	2200	2120	2000	900	1203	478	2140	1050	570	611
210	960	2500	2120	2000	900	1203	478	2440	1050	631	673
240	960	2800	2220	2100	900	1572	478	2740	1150	682	730
270	960	2800	2320	2200	900	1572	478	2740	1200	735	789
300	960	2800	2420	2300	900	1572	478	2740	1350	786	845
330	1060	3100	2420	2300	1000	1588	569	3040	1300	952	1018
350	1160	3200	2520	2400	1100	1776	638	3140	1300	1020	1089
400	1160	3400	2620	2500	1100	1776	638	3340	1400	1067	1181
450	1160	3600	2720	2600	1100	1776	638	3540	1500	1112	1129
500	1160	3800	2720	2600	1100	1776	638	3740	1500	1194	1330

Notes:
1, unit has the same cabinet dimensions with 50/100mm humidifier option;
2, if to use outer installed filter rack for plate primary filter, 40mm should be added on dimension A in above table;
3, unit standard configuration is front top discharge type

Horizontal Standard 1

Outer Nylon Filter + Chilling Coil + Fan



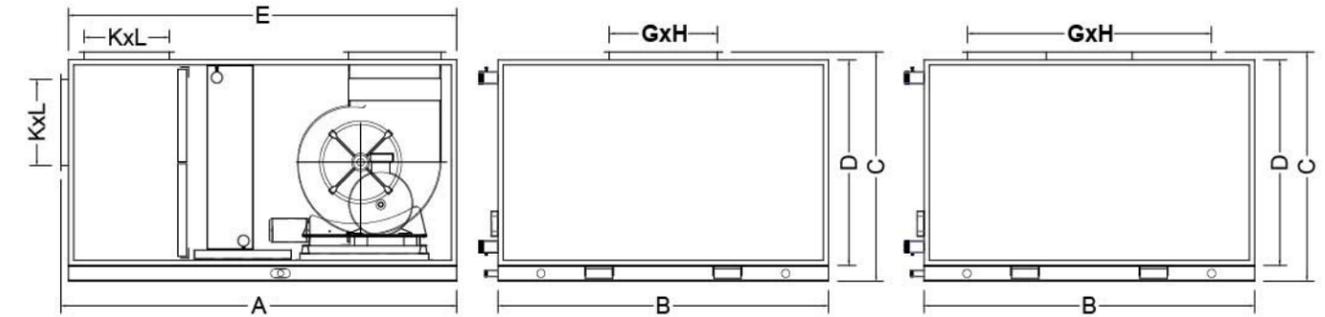
Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4Rows	6Rows
020	1060	853	690	570	1000	232	262	793	510	129	138
030	1160	953	720	600	1100	298	262	893	540	148	155
040	1160	1053	790	670	1100	331	289	993	610	167	175
050	1160	1053	920	800	1100	309	341	993	740	186	197
060	1160	1153	990	870	1100	395	341	1093	810	211	223
070	1260	1203	1070	950	1200	373	404	1143	890	242	257
080	1260	1353	1070	950	1200	373	404	1293	890	256	282
090	1410	1353	1170	1050	1350	430	478	1293	990	299	318
105	1410	1553	1170	1050	1350	430	478	1493	990	325	342
120	1460	1703	1170	1050	1400	557	478	1643	990	350	376
135	1360	1953	1170	1050	1300	1040	404	1893	990	442	459
150	1360	1953	1270	1150	1300	1040	404	1893	1090	447	470
180	1510	2153	1320	1200	1450	1203	478	2093	1140	539	580
210	1510	2353	1370	1250	1450	1203	478	2293	1190	584	626
240	1510	2653	1390	1250	1450	1572	478	2593	1190	644	692
270	1510	2653	1520	1380	1450	1572	478	2593	1320	728	781
300	1560	2653	1640	1500	1500	1572	478	2593	1440	761	813
330	1610	2903	1640	1500	1550	1588	569	2843	1440	882	947
350	1710	3053	1640	1500	1650	1776	638	2993	1440	953	1022
400	1760	3053	1893	1753	1700	1776	638	2993	1693	986	1099
450	1760	3053	2020	1880	1700	1776	638	2993	1820	1070	1187
500	1760	3153	2150	2010	1700	1776	638	3093	1950	1097	1231

Notes:

- 1, unit has the same cabinet dimensions with 50/100mm humidifier option;
- 2, there are double chilling coils for MAH400-500EH;
- 3, if to use outer installed filter rack for plate primary filter, 40mm should be added on dimension A in above table;
- 4, if unit is rear discharge, 40mm should be reduced for dimension C in above table

Horizontal Standard 2

Mixing + Primary Filter + Chilling Coil + Fan



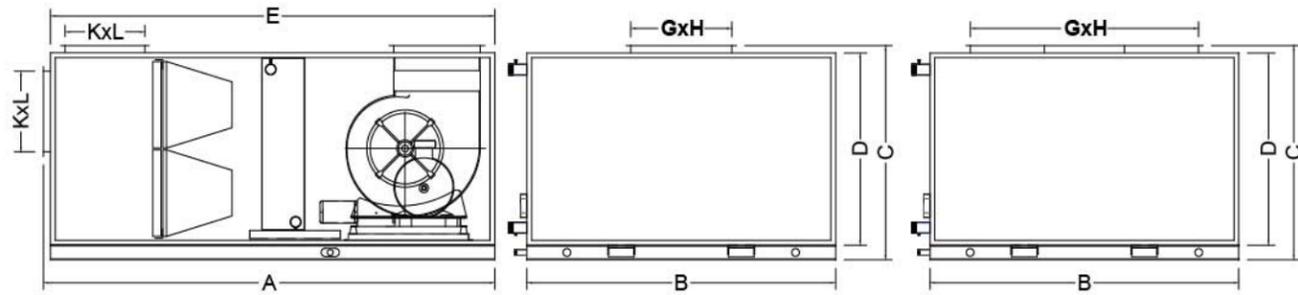
Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4Rows	6Rows
020	1540	853	690	570	1500	232	262	600	160	158	164
030	1640	953	720	600	1600	298	262	600	300	177	184
040	1640	1053	790	670	1600	331	289	700	300	201	208
050	1640	1053	920	800	1600	309	341	800	300	230	240
060	1640	1153	990	870	1600	395	341	900	300	261	274
070	1740	1203	1070	950	1700	373	404	1000	300	288	303
080	1740	1353	1070	950	1700	373	404	1100	300	319	335
090	1990	1353	1170	1050	1950	430	478	1000	440	343	362
105	1990	1553	1170	1050	1950	430	478	1100	440	392	408
120	2040	1703	1170	1050	2000	557	478	1200	440	426	452
135	1940	1953	1170	1050	1900	1040	404	1300	440	525	554
150	1940	1953	1270	1150	1900	1040	404	1500	440	569	597
180	2090	2153	1320	1200	2050	1203	478	1700	440	652	693
210	2090	2353	1370	1250	2050	1203	478	1900	440	707	750
240	2090	2653	1390	1250	2050	1572	478	2200	440	780	829
270	2290	2653	1520	1380	2250	1572	478	2200	580	912	965
300	2340	2653	1640	1500	2300	1572	478	2300	580	958	1017
330	2390	2903	1640	1500	2350	1588	569	2400	580	1084	1149
350	2490	3053	1640	1500	2450	1776	638	2400	580	1170	1239
400	2540	3053	1893	1753	2500	1776	638	2600	580	1202	1315
450	2540	3053	2020	1880	2500	1776	638	2800	580	1285	1403
500	2640	3153	2150	2010	2600	1776	638	2800	630	1324	1459

Notes:

- 1, unit has the same cabinet dimensions with 50/100mm humidifier option;
- 2, there are double chilling coils for MAH400-500EH

Horizontal Standard 3

mixing + primary filter + medium filter + chilling coil + fan



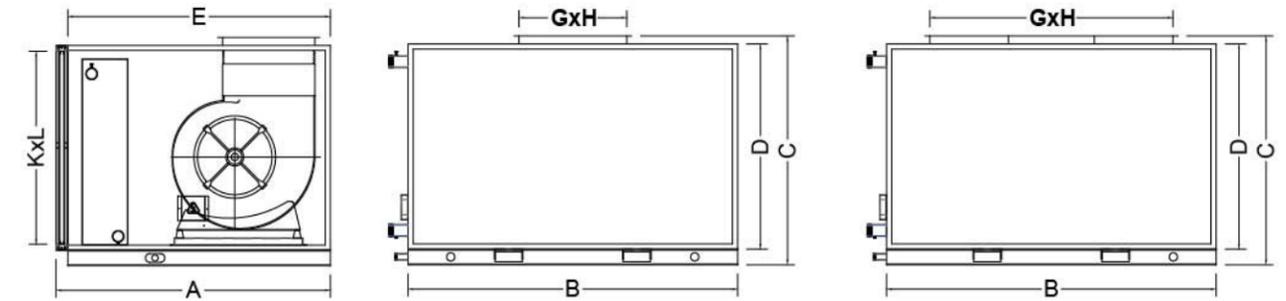
Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4Rows	6Rows
020	1990	853	690	570	1950	232	262	600	160	176	181
030	2040	953	720	600	2000	298	262	600	300	197	201
040	2090	1053	790	670	2050	331	289	700	300	224	232
050	2090	1053	920	800	2050	309	341	800	300	249	259
060	2090	1153	990	870	2050	395	341	900	300	282	295
070	2190	1203	1070	950	2150	373	404	1000	300	310	324
080	2190	1353	1070	950	2150	373	404	1100	300	345	362
090	2440	1353	1170	1050	2400	430	478	1000	440	394	412
105	2440	1553	1170	1050	2400	430	478	1100	440	433	450
120	2490	1703	1170	1050	2450	557	478	1200	440	471	494
135	2390	1953	1170	1050	2350	1040	404	1300	440	574	598
150	2390	1953	1270	1150	2350	1040	404	1500	440	622	645
180	2540	2153	1320	1200	2500	1203	478	1700	440	727	759
210	2540	2353	1370	1250	2500	1203	478	1900	440	809	842
240	2540	2653	1390	1250	2500	1572	478	2200	440	885	922
270	2740	2653	1520	1380	2700	1572	478	2200	580	978	1022
300	2790	2653	1640	1500	2750	1572	478	2300	580	1033	1092
330	2840	2903	1640	1500	2800	1588	569	2400	580	1185	1250
350	2940	3053	1640	1500	2900	1776	638	2400	580	1246	1316
400	2940	3053	1893	1753	2900	1776	638	2600	580	1306	1400
450	2940	3053	2020	1880	2900	1776	638	2800	580	1421	1539
500	3040	3153	2150	2010	3000	1776	638	2800	630	1462	1597

Notes:

- 1, unit has the same cabinet dimensions with 50/100mm humidifier option;
- 2, there are double chilling coils for MAH400-500EH;
- 3, standard primary filter is G3 plate type and medium filter is M5 bag type. Primary filter is optional with G4 and medium filter is optional with M6.

Horizontal Standard 4

Outer Nylon Filter + Hot Water Heating + Fan



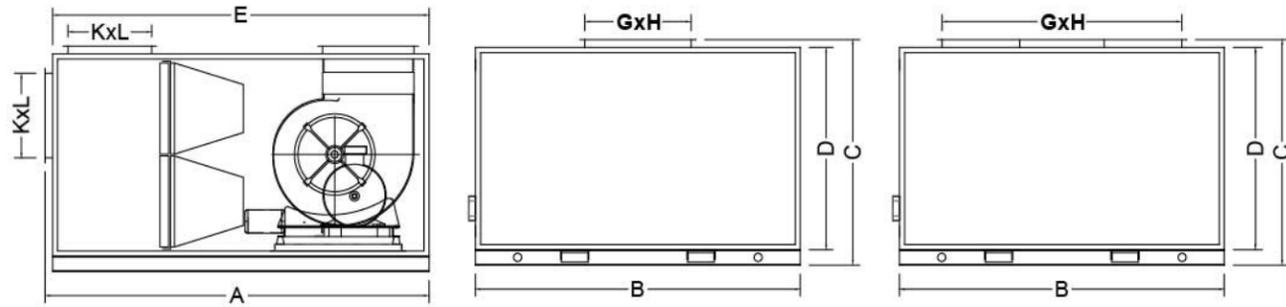
Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4Rows	6Rows
020	1060	853	690	570	1000	232	262	793	540	116	120
030	1160	953	720	600	1100	298	262	893	540	141	145
040	1160	1053	790	670	1100	331	289	993	610	159	163
050	1160	1053	920	800	1100	309	341	993	740	175	181
060	1160	1153	990	870	1100	395	341	1093	810	199	205
070	1260	1203	1070	950	1200	373	404	1143	890	227	235
080	1260	1353	1070	950	1200	373	404	1293	890	240	248
090	1410	1353	1170	1050	1350	430	478	1293	990	280	290
105	1410	1553	1170	1050	1350	430	478	1493	990	308	317
120	1460	1703	1170	1050	1400	557	478	1643	990	324	337
135	1360	1953	1170	1050	1300	1040	404	1893	990	425	434
150	1360	1953	1270	1150	1300	1040	404	1893	1090	424	436
180	1510	2153	1320	1200	1450	1203	478	2093	1140	498	519
210	1510	2353	1370	1250	1450	1203	478	2293	1190	542	563
240	1510	2653	1390	1250	1450	1572	478	2593	1190	596	620
270	1510	2653	1520	1380	1450	1572	478	2593	1320	675	702
300	1560	2653	1640	1500	1500	1572	478	2593	1440	709	735

Note:

- 1, if to use outer installed filter rack for plate primary filter, 40mm should be added on dimension A in above table;

Horizontal Standard 5

Mixing + Primary Filter + Medium Filter + Fan

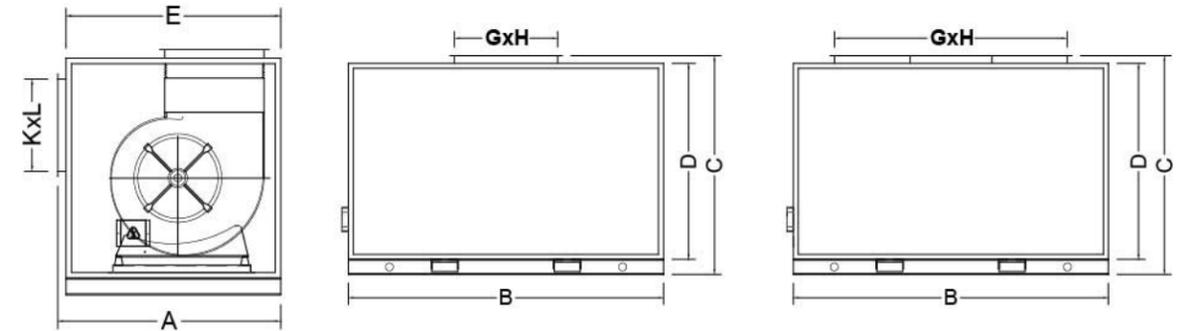


Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)
020	1540	853	690	570	1500	232	262	600	160	146
030	1640	953	720	600	1600	298	262	600	300	163
040	1640	1053	790	670	1600	331	289	700	300	187
050	1640	1053	920	800	1600	309	341	800	300	210
060	1640	1153	990	870	1600	395	341	900	300	235
070	1740	1203	1070	950	1700	373	404	1000	300	258
080	1740	1353	1070	950	1700	373	404	1100	300	287
090	1990	1353	1170	1050	1950	430	478	1000	440	305
105	1990	1553	1170	1050	1950	430	478	1100	440	360
120	2040	1703	1170	1050	2000	557	478	1200	440	374
135	1940	1953	1170	1050	1900	1040	404	1300	440	467
150	1940	1953	1270	1150	1900	1040	404	1500	440	513
180	2090	2153	1320	1200	2050	1203	478	1700	440	570
210	2090	2353	1370	1250	2050	1203	478	1900	440	621
240	2090	2653	1390	1250	2050	1572	478	2200	440	682
270	2290	2653	1520	1380	2250	1572	478	2200	580	806
300	2340	2653	1640	1500	2300	1572	478	2300	580	840

Note
1, standard primary filter is G3 plate type and medium filter is M5 bag type. Primary filter is optional with G4 and medium filter is optional with M6.

Horizontal Standard 6

Air Entering + Fan



Model MAH	A	B	C	D	E	G	H	K	L	Weight(kg)
020	640	853	690	570	600	232	262	600	160	125
030	640	953	720	600	600	298	262	600	300	148
040	640	1053	790	670	600	331	289	700	300	167
050	740	1053	920	800	700	309	341	800	300	186
060	740	1153	920	800	700	395	341	900	300	211
070	840	1203	1020	900	800	373	404	1000	300	242
080	840	1353	1020	900	800	373	404	1100	300	256
090	940	1353	1170	1050	900	430	478	1000	440	299
105	940	1353	1170	1050	900	430	478	1100	440	325
120	940	1703	1170	1050	900	557	478	1200	440	350
135	840	1953	1020	900	800	1040	404	1300	440	442
150	840	1953	1020	900	800	1040	404	1500	440	447
180	940	2153	1170	1050	900	1203	478	1700	440	539
210	940	2353	1170	1050	900	1203	478	1900	440	584
240	940	2653	1190	1050	900	1572	478	2200	440	644
270	940	2653	1190	1050	900	1572	478	2200	580	728
300	940	2653	1190	1050	900	1572	478	2300	580	761

Vertical Standard Unit 1

Model MAH	Air Flow (m³/h)	Chilling Coil Rows	Motor Power under different ESP										
			120	170	220	270	320	370	420	470	520	570	620
020	2000	4	0.55	0.55	0.55	0.55	0.55						
		6	0.55	0.55	0.55	0.55	0.75						
030	3000	4	0.55	0.75	0.75	0.75	1.1						
		6	0.75	0.75	0.75	1.1	1.1						
040	4000	4	1.1	1.1	1.1	1.1	1.1	1.5					
		6	1.1	1.1	1.1	1.1	1.5	1.5					
050	5000	4	1.1	1.1	1.1	1.5	1.5	1.5					
		6	1.1	1.1	1.5	1.5	1.5	1.5					
060	6000	4	1.5	1.5	1.5	2.2	2.2	2.2					
		6	1.5	1.5	2.2	2.2	2.2	2.2					
070	7000	4	1.5	1.5	1.5	2.2	2.2	2.2	2.2				
		6	1.5	1.5	2.2	2.2	2.2	2.2	2.2				
080	8000	4	2.2	2.2	2.2	2.2	2.2	3.0	3.0				
		6	2.2	2.2	2.2	2.2	3.0	3.0	3.0				
090	9000	4	2.2	2.2	2.2	2.2	3.0	3.0	3.0				
		6	2.2	2.2	2.2	3.0	3.0	3.0	3.0				
105	10500	4	2.2	3.0	3.0	3.0	3.0	3.0	4.0				
		6	3.0	3.0	3.0	3.0	3.0	4.0	4.0				
120	12000	4	2.2	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0		
		6	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	5.5		
135	13500	4	3.0	3.0	3.0	4.0	4.0	4.0	4.0	5.5	5.5		
		6	3.0	3.0	4.0	4.0	4.0	4.0	5.5	5.5	5.5		
150	15000	4	3.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5		
		6	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5	7.5		
180	18000	4			5.5	5.5	5.5	5.5	7.5	7.5	7.5		
		6			5.5	5.5	5.5	7.5	7.5	7.5	7.5		
210	21000	4			5.5	7.5	7.5	7.5	7.5	11.0	11.0		
		6			7.5	7.5	7.5	7.5	11.0	11.0	11.0		
240	24000	4			5.5	7.5	7.5	7.5	11.0	11.0	11.0	11.0	
		6			7.5	7.5	7.5	11.0	11.0	11.0	11.0	11.0	
270	27000	4			7.5	7.5	11.0	11.0	11.0	11.0	11.0	15.0	15.0
		6			7.5	11.0	11.0	11.0	11.0	11.0	11.0	15.0	15.0
300	30000	4			11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0
		6			11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0	
330	33000	4			11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0	15.0
		6			11.0	11.0	11.0	15.0	15.0	15.0	15.0	15.0	
350	35000	4			11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0
		6			11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0	15.0
400	40000	4			11.0	15.0	15.0	15.0	15.0	15.0	18.5	18.5	
		6			15.0	15.0	15.0	15.0	15.0	15.0	18.5	18.5	18.5
450	45000	4			15.0	15.0	15.0	18.5	18.5	18.5	18.5	22.0	
		6			15.0	15.0	18.5	18.5	18.5	18.5	22.0	22.0	
500	50000	4			18.5	18.5	18.5	22.0	22.0	22.0			
		6			18.5	18.5	22.0	22.0	22.0				

Horizontal Standard 1

Model MAH	Air Flow (m³/h)	Chilling Coil Rows	Motor Power under different ESP										
			170	220	270	320	370	420	470	520	570		
020	2000	4	0.55	0.55	0.55	0.55	0.75						
		6	0.55	0.55	0.55	0.75	0.75						
030	3000	4	0.75	0.75	0.75	1.1	1.1						
		6	0.75	0.75	1.1	1.1	1.1						
040	4000	4	1.1	1.1	1.1	1.1	1.5						
		6	1.1	1.1	1.1	1.5	1.5						
050	5000	4	1.1	1.1	1.5	1.5	1.5	1.5					
		6	1.1	1.1	1.5	1.5	1.5	1.5					
060	6000	4	1.5	1.5	2.2	2.2	2.2	2.2					
		6	1.5	1.5	2.2	2.2	2.2	2.2					
070	7000	4	1.5	1.5	2.2	2.2	2.2	2.2	2.2				
		6	1.5	1.5	2.2	2.2	2.2	2.2	2.2				
080	8000	4	2.2	2.2	2.2	2.2	3.0	3.0	3.0				
		6	2.2	2.2	2.2	2.2	3.0	3.0	3.0				
090	9000	4	2.2	2.2	2.2	3.0	3.0	3.0	3.0				
		6	2.2	2.2	2.2	3.0	3.0	3.0	3.0				
105	10500	4	2.2	3.0	3.0	3.0	3.0	4.0	4.0				
		6	3.0	3.0	3.0	3.0	4.0	4.0	4.0				
120	12000	4	2.2	3.0	3.0	3.0	4.0	4.0	4.0	4.0			
		6	3.0	3.0	3.0	4.0	4.0	4.0	4.0	5.5			
135	13500	4	3.0	3.0	4.0	4.0	4.0	4.0	5.5	5.5			
		6	3.0	3.0	4.0	4.0	4.0	5.5	5.5	5.5			
150	15000	4	3.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5			
		6	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5	7.5		
180	18000	4			5.5	5.5	5.5	5.5	7.5	7.5	7.5		
		6			5.5	5.5	5.5	7.5	7.5	7.5	7.5		
210	21000	4			5.5	7.5	7.5	7.5	7.5	11.0	11.0		
		6			7.5	7.5	7.5	7.5	11.0	11.0	11.0		
240	24000	4			5.5	7.5	7.5	7.5	11.0	11.0	11.0	11.0	
		6			7.5	7.5	7.5	11.0	11.0	11.0	11.0	11.0	
270	27000	4			7.5	7.5	11.0	11.0	11.0	11.0	11.0	15.0	15.0
		6			7.5	11.0	11.0	11.0	11.0	11.0	11.0	15.0	15.0
300	30000	4			11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0
		6			11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0	
330	33000	4			11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0	15.0
		6			11.0	11.0	11.0	15.0	15.0	15.0	15.0	15.0	
350	35000	4			11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0
		6			11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0	15.0
400	40000	4			11.0	15.0	15.0	15.0	15.0	15.0	18.5	18.5	
		6			15.0	15.0	15.0	15.0	15.0	15.0	18.5	18.5	18.5
450	45000	4			15.0	15.0	15.0	18.5	18.5	18.5	18.5	22.0	
		6			15.0	15.0	18.5	18.5	18.5	18.5	22.0	22.0	
500	50000	4			18.5	18.5	18.5	22.0	22.0	22.0			
		6			18.5	18.5	22.0	22.0	22.0				

Horizontal Standard 2

Model MAH	Air Flow (m³/h)	Chilling Coil Rows	Motor Power under different ESP								
			170	220	270	320	370	420	470	520	570
020	2000	4	0.55	0.55	0.75	0.75	0.75				
		6	0.55	0.75	0.75	0.75	0.75				
030	3000	4	0.75	0.75	1.1	1.1	1.1				
		6	0.75	1.1	1.1	1.1	1.1				
040	4000	4	1.1	1.1	1.1	1.5	1.5				
		6	1.1	1.1	1.5	1.5	1.5				
050	5000	4	1.1	1.5	1.5	1.5	1.5				
		6	1.5	1.5	1.5	1.5	2.2				
060	6000	4	1.5	2.2	2.2	2.2	2.2	2.2			
		6	2.2	2.2	2.2	2.2	2.2	3.0			
070	7000	4	1.5	2.2	2.2	2.2	2.2	2.2			
		6	2.2	2.2	2.2	2.2	2.2	3.0			
080	8000	4		2.2	2.2	3.0	3.0	3.0	3.0		
		6		2.2	3.0	3.0	3.0	3.0	3.0		
090	9000	4		2.2	3.0	3.0	3.0	3.0	4.0		
		6		3.0	3.0	3.0	3.0	4.0	4.0		
105	10500	4		3.0	3.0	4.0	4.0	4.0	4.0		
		6		3.0	4.0	4.0	4.0	4.0	4.0		
120	12000	4		3.0	3.0	4.0	4.0	4.0	5.5		
		6		3.0	4.0	4.0	4.0	5.5	5.5		
135	13500	4		4.0	4.0	4.0	4.0	5.5	5.5		
		6		4.0	4.0	4.0	5.5	5.5	5.5		
150	15000	4			5.5	5.5	5.5	5.5	5.5	7.5	
		6			5.5	5.5	5.5	5.5	7.5	7.5	
180	18000	4			5.5	5.5	7.5	7.5	7.5	7.5	
		6			5.5	7.5	7.5	7.5	7.5	7.5	
210	21000	4			7.5	7.5	7.5	11.0	11.0	11.0	
		6			7.5	7.5	11.0	11.0	11.0	11.0	
240	24000	4				7.5	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	11.0	
270	27000	4				11.0	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	15.0	
300	30000	4				11.0	11.0	15.0	15.0	15.0	
		6				11.0	15.0	15.0	15.0	15.0	
330	33000	4				11.0	15.0	15.0	15.0	15.0	15.0
		6				15.0	15.0	15.0	15.0	15.0	15.0
350	35000	4				11.0	15.0	15.0	15.0	15.0	15.0
		6				15.0	15.0	15.0	15.0	15.0	15.0
400	40000	4					15.0	15.0	15.0	18.5	18.5
		6					15.0	15.0	18.5	18.5	18.5
450	45000	4					18.5	18.5	18.5	18.5	22.0
		6					18.5	18.5	18.5	22.0	22.0
500	50000	4					22.0	22.0	22.0		
		6					22.0	22.0			

Horizontal Standard 3

Model MAH	Air Flow (m³/h)	Chilling Coil Rows	Motor Power under different ESP								
			120	170	220	270	320	370	420	470	520
020	2000	4	0.55	0.75	0.75	0.75	0.75	1.1	1.1	1.1	
		6	0.75	0.75	0.75	0.75	1.1	1.1	1.1	1.1	
030	3000	4	0.75	1.1	1.1	1.1	1.1	1.1	1.5	1.5	
		6	1.1	1.1	1.1	1.1	1.1	1.5	1.5		
040	4000	4	1.1	1.1	1.5	1.5	1.5	2.2	2.2	2.2	
		6	1.1	1.5	1.5	1.5	2.2	2.2	2.2	2.2	
050	5000	4	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2	
		6	1.5	1.5	1.5	2.2	2.2	2.2	2.2	2.2	
060	6000	4	2.2	2.2	2.2	2.2	2.2	3.0	3.0	3.0	
		6	2.2	2.2	2.2	2.2	3.0	3.0	3.0		
070	7000	4		2.2	2.2	2.2	2.2	3.0	3.0	3.0	
		6		2.2	2.2	2.2	3.0	3.0	3.0	3.0	
080	8000	4		2.2	3.0	3.0	3.0	3.0	4.0	4.0	
		6		3.0	3.0	3.0	3.0	3.0	4.0	4.0	
090	9000	4				3.0	3.0	4.0	4.0	4.0	
		6				3.0	4.0	4.0	4.0	4.0	
105	10500	4				4.0	4.0	4.0	4.0	5.5	
		6				4.0	4.0	4.0	5.5	5.5	
120	12000	4				4.0	4.0	5.5	5.5	5.5	
		6				4.0	5.5	5.5	5.5	5.5	
135	13500	4				4.0	5.5	5.5	5.5	5.5	
		6				5.5	5.5	5.5	5.5	7.5	
150	15000	4				5.5	5.5	5.5	7.5	7.5	
		6				5.5	5.5	7.5	7.5	7.5	
180	18000	4				5.5	7.5	7.5	7.5	7.5	
		6				5.5	7.5	7.5	7.5	11.0	
210	21000	4				7.5	7.5	11.0	11.0	11.0	
		6				7.5	11.0	11.0	11.0	11.0	
240	24000	4					7.5	11.0	11.0	11.0	
		6					11.0	11.0	11.0	11.0	
270	27000	4					11.0	11.0	11.0	11.0	
		6					11.0	11.0	11.0	15.0	
300	30000	4					11.0	11.0	15.0	15.0	
		6					11.0	15.0	15.0	15.0	
330	33000	4					11.0	15.0	15.0	15.0	15.0
		6					15.0	15.0	15.0	15.0	18.5
350	35000	4					11.0	15.0	15.0	15.0	15.0
		6					15.0	15.0	15.0	15.0	18.5
400	40000	4					15.0	15.0	15.0	18.5	18.5
		6					15.0	15.0	18.5	18.5	18.5
450	45000	4					18.5	18.5	18.5	18.5	22.0
		6					18.5	18.5	18.5	22.0	22.0
500	50000	4					22.0	22.0	22.0		
		6					22.0	22.0			

Horizontal Standard 4

Model MAH	Air Flow (m³/h)	Motor Power under different ESP								
		250	300	350	400	450	500	550	600	650
020	2000	0.55	0.55	0.55	0.55	0.75				
030	3000	0.75	0.75	0.75	1.1	1.1				
040	4000	1.1	1.1	1.1	1.1	1.5				
050	5000		1.1	1.5	1.5	1.5	1.5	2.2		
060	6000		1.5	2.2	2.2	2.2	2.2	2.2		
070	7000		1.5	2.2	2.2	2.2	2.2	2.2		
080	8000		2.2	2.2	2.2	3.0	3.0	3.0		
090	9000		2.2	2.2	3.0	3.0	3.0	3.0		
105	10500		3.0	3.0	3.0	3.0	4.0	4.0		
120	12000		3.0	3.0	3.0	4.0	4.0	4.0		
135	13500		3.0	4.0	4.0	4.0	4.0	5.5		
150	15000		4.0	4.0	5.5	5.5	5.5	5.5	5.5	
180	18000		5.5	5.5	5.5	5.5	7.5	7.5	7.5	
210	21000		5.5	7.5	7.5	7.5	7.5	11.0	11.0	
240	24000		5.5	7.5	7.5	7.5	11.0	11.0	11.0	
270	27000		7.5	7.5	11.0	11.0	11.0	11.0	11.0	11.0
300	30000		11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0

以上是1排加热盘管时对应的电机功率，若加热盘管为2排，机外静压往上增加一档选择对应的电机功率。

Horizontal Standard 5

Model MAH	Air Flow (m³/h)	Motor Power under different ESP							
		200	250	300	350	400	450	500	550
020	2000	0.55	0.75	0.75	0.75	0.75	1.1	1.1	1.1
030	3000	0.75	1.1	1.1	1.1	1.1	1.1	1.5	1.5
040	4000	1.1	1.1	1.5	1.5	1.5	2.2	2.2	2.2
050	5000	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2
060	6000	2.2	2.2	2.2	2.2	2.2	3.0	3.0	3.0
070	7000		2.2	2.2	2.2	2.2	3.0	3.0	3.0
080	8000		2.2	3.0	3.0	3.0	3.0	3.0	3.0
090	9000				3.0	3.0	4.0	4.0	4.0
105	10500				4.0	4.0	4.0	4.0	5.5
120	12000				4.0	4.0	5.5	5.5	5.5
135	13500				4.0	5.5	5.5	5.5	5.5
150	15000				5.5	5.5	5.5	7.5	7.5
180	18000				7.5	7.5	7.5	7.5	7.5
210	21000				7.5	11.0	11.0	11.0	11.0
240	24000				11.0	11.0	11.0	11.0	11.0
270	27000				11.0	11.0	11.0	11.0	15.0
300	30000				11.0	15.0	15.0	15.0	15.0

Horizontal Standard 6

Model MAH	Air Flow (m³/h)	Motor Power under different ESP								
		250	300	350	400	450	500	550	600	650
020	2000	0.55	0.55	0.55	0.55	0.75				
030	3000	0.75	0.75	0.75	1.1	1.1				
040	4000	1.1	1.1	1.1	1.1	1.5				
050	5000		1.1	1.5	1.5	1.5	1.5	2.2		
060	6000		1.5	2.2	2.2	2.2	2.2	2.2		
070	7000		1.5	2.2	2.2	2.2	2.2	2.2		
080	8000		2.2	2.2	2.2	3.0	3.0	3.0		
090	9000		2.2	2.2	3.0	3.0	3.0	3.0		
105	10500		3.0	3.0	3.0	3.0	4.0	4.0		
120	12000		3.0	3.0	3.0	4.0	4.0	4.0		
135	13500		3.0	4.0	4.0	4.0	4.0	5.5		
150	15000		4.0	4.0	5.5	5.5	5.5	5.5	5.5	
180	18000		5.5	5.5	5.5	5.5	7.5	7.5	7.5	
210	21000		5.5	7.5	7.5	7.5	7.5	11.0	11.0	
240	24000		5.5	7.5	7.5	7.5	11.0	11.0	11.0	
270	27000		7.5	7.5	11.0	11.0	11.0	11.0	11.0	11.0
300	30000		11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0

Humidify Performance Parameters

Wet Film Humidifier

Wet Film Humidifier is a type of hydraulic material, it distributes absorbed water evenly on material surface, created a vapor layer, when air pass through the material surface, water in the vapor layer evaporated and absorbed by air. The wet film thickness is optional with 50mm and 100mm, according to required humidify quantity.

Applied Condition

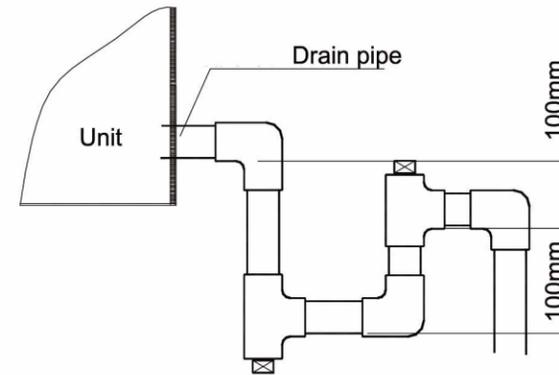
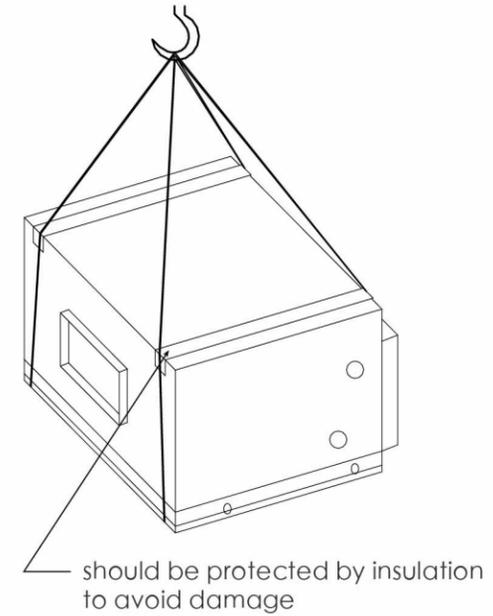
Ambient temperature and humidity:	5-80deg.C; up to 90% RH;
Critical Wind Speed:	less than 3.75m/s
Water Requirement:	Tap water, pure water
Water Condition:	0.05...
Water Quantity:	2-3 times of humidify quantity, with external connections size DN15..
Power Supply:	AC220V/50HZ

Wet Film Humidifier Performance Table

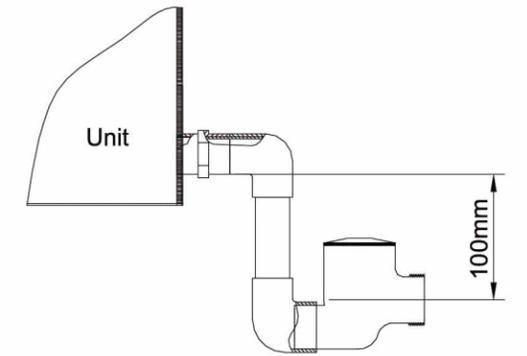
Model	Air Flow m³/h	Face Area		Maximum Humidifying Capacity (kg/h)		Weight (kg)	
		H mm	W mm	50mm	100mm	50mm	100mm
020	2000	401	680	5	11	2	4
030	3000	492	780	8	15	3	5
040	4000	543	870	9	19	3	7
050	5000	695	870	12	24	4	8
060	6000	756	970	15	29	5	10
070	7000	807	1010	16	33	6	12
080	8000	807	1160	19	37	7	14
090	9000	909	1160	21	42	8	16
105	10500	909	1360	25	49	9	18
120	12000	909	1510	27	55	10	20
135	13500	909	1750	32	64	12	24
150	15000	1010	1750	35	71	13	25
180	18000	1061	1950	41	83	15	30
210	21000	1128	2160	49	97	18	35
240	24000	1128	2460	55	111	20	40
270	27000	1255	2460	62	123	22	44
300	30000	1382	2460	68	136	24	49
330	33000	1382	2710	75	150	27	54
350	35000	1382	2860	79	158	28	57
400	40000	1620	2660	86	172	31	62
450	45000	1747	2760	96	193	35	69
500	50000	1874	2860	107	214	39	77

If MAH unit is selected with humidifier, total unit pressure drop should be increased: 50mm...

- Before installation, check if the unit has any damage. If there are below damages, contact seller to fix or replace: scratch and knocked wounded for products, become deformed, fan or motor loosening
- Unit hoisting should be firm and performed as shown at figure at right side. To remove the unit horizontally by fork, the hoisting point should be firm and strong enough to bear unit weight. And keep the unit in level status.
- section, rotate fan wheel manually to check if the running direction is correct, make sure there is no abnormal friction noise. Plug and run fan, check if fan runs in correct direction, if wrong then change the power line phase sequence.
- Suggest to put plenum chamber at air charge, and set air damper at duct, and set fire damper as per fire fighting requirement. If motorized air damper is installed, the actuator should be turned on prior to fan running and be closed later than fan stop.



U Trap Installation



Ball type water seal installation

- before water pipe connecting, water pipes should be flushed. Water entering and leaving directions, should be considered during pipe connection, valves and filters should be installed at entering water pipe to adjust water flow rate. Cut off water supply during service to prevent dirties entering heat exchanger and jamming, entering and leaving water pipes should be insulated by insulating pipe.
- During pipe connecting, use one pipe wrench to hold the pipe to avoid twisting force on pipe end during operation. Suggest to Teflon tape to seal to avoid water leakage. The condensate drain must be connected with certain height U trap and should be lead to sewer by drainage pipe.
- The weight of ducts and water pipes should not be borne by unit.
- Unit should be grounded properly, and check if electrical wirings are in good condition and comply to electrical safety regulation.
- Unit should be installed by qualified personnel.

- The minimum startup voltage of the unit must be kept above 90% of the rated voltage, the voltage during operation must be within $\pm 10\%$ of the rated voltage and the voltage difference among all phases shall be within $\pm 2\%$. Overvoltage or undervoltage will have adverse effect on the unit. Stable power supply shall be guaranteed and in case of unstable voltage, excessive current will be generated at the moment of unit startup for operation, and this may damage the unit motor.
- The unit maintenance and repair can only be conducted provided that the unit is shut down and it is disconnected with the power supply.
- In case of unit failure, it can only be started after causes for the failure are identified and eliminated and no forced startup shall be conducted before the failure is not eliminated.
- No short connection of the lines for the unit protection device shall be conducted. Otherwise, this may lead to the unit failure.
- The internal cables of the unit shall be protected properly to prevent the insulation layer from damage due to sharp objects. The wire and cable shall be kept far away from the heat source and they shall not be bent or twisted
- Air filter
The accumulated dust of the unit strainer shall be inspected regularly (twice for each month as recommended). Users who have installed differential pressure detector shall clean or replace the filter in case the final resistance reaches the specified value and TICA suggests that the final resistance value shall be:

specification of filtration efficiency	suggested final resistance (Pa)
G3	100-200
G4	150-250
M5-M6	250-300

- Heat exchanger
The coil fin, copper pipes, etc. of the heat exchanger shall be free from scratch or flattening due to impact. The coil shall be kept clean and the coil fin can be brushed and washed with the nylon brush. It shall be cleaned with the vacuum cleaner before brushing. In case of the compressed air, the coil may be cleaned with the high-pressure air pipe or nozzle. Upon the cleaning of the coil, its external surface shall be free from dust and the heat transfer effect of the internal surface shall reach its initial updating and heat transfer capacity. Besides the fin cleaning, internal incrustation shall be washed and removed from the coil after the coil has been used for 2~3 years. The cold water and hot water for the unit coil shall be softened water.
- The belt tightness shall be readjusted after the unit has operated for one week and the regular inspection shall be conducted every three months of operation in future.
- The wiring pile head of the wire will be loosened after the unit operates for a certain time. It shall be inspected and tightened on the third day upon the first startup.
- Bearings for the fan and the motor shall be inspected regularly (three times per month as recommended). The seal ring of the motor bearing (for instance, V-seal ring) shall be inspected, and it shall be replaced timely if necessary; the erection joint shall be inspected to confirm whether it is loose; the bearing operation shall be inspected through monitoring the abnormal noise, vibration, oil consumption or with the bearing vibration measurement element, etc. In case of any abnormalities, the unit shall be shut down immediately, and causes shall be identified and eliminated timely. Heating shall be conducted or special tools shall be used for the assembly and disassembly of bearings and bearings shall not be knocked violently or moved.
- Servicing of fan bearing:
For fans with the oil nozzle, the lubricating oil of matching specification shall be filled into the bearing regularly. In case that the users select the grease of the same designation for grease filling, they shall use the grease of the designation all the time.
- The validity of the lubricating grease depends on the grease type, revolving speed of bearings, bearing diameter and operating environment. Under normal conditions, the lubricating grease shall be replaced after the fan has operated for about 1,500 h; in case that the fan keeps 24-hour operation, the lubricating grease shall be replaced upon 500~700-hour operation.
- Methods for lubricating oil filling: the bearing shall keep rotating during the grease filling, and in case that a layer of fresh grease overflow from the dust cover, the grease filling may be stopped and the wind wheel shall be rotated quickly manually to discharge excessive grease.

- Check the sealing strip of the access door and the flexible joint of the air duct regularly (once per month), and timely replace them in case of air leakage.
- Other precautions:
 - 1) Clean the A/C only after turning off the unit and switching off the power supply, otherwise, you may get electrocuted or injured.
 - 2) Never conduct overhauling during unit operation.
 - 3) Never replace the fuse with a steel or copper wire. Please use the fuse of correct specification, otherwise, the unit may be damaged.
 - 4) Switch off the power supply and ask the retailer for guidance in case of any abnormality (e.g. scorched flavor). If the A/C unit is still used in such a case, it may be damaged and an electric shock or fire may occur. Maintenance can only be performed by professional maintenance personnel. All power supplies must be switched off before the devices are wired.
 - 5) Refer to the Installation Manual for other unmentioned matters.
- Note: The unit components (e.g. humidifier, runner heat recovery device, burner and spray system) must be operated, repaired and maintained as per their attached operation or maintenance manuals or user's manuals containing detailed regulations on operation, repair and maintenance if any.

Electric Wiring Diagram

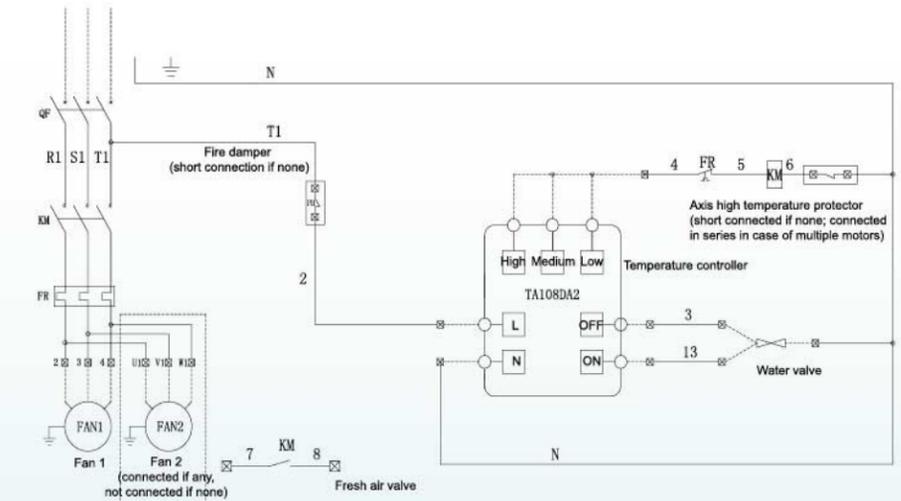
Installation instructions for the control cabinet

When the motor power is less than or equal to 7.5 kW, the control cabinet is installed from the side or top of the TAD unit, with the motor wiring completed. The temperature controller is supplied randomly and installed on the wall of the indoor operation room on site through remote control. Wires to be connected on site include the power supply line of the control cabinet and the signal line between the temperature controller and the control cabinet.

When the motor power is greater than or equal to 11 kW, the motor is started in the star-delta mode, the control cabinet is supplied separately as an accessory, wires including the power supply incoming line of the control cabinet and the motor power supply line between the control cabinet and the motor are connected on site, and the temperature controller has been installed on the control cabinet panel.

Other instructions

Connecting the water valve is energy-saving, but never install the water valve in the full fresh air mode for the purpose of anti-frost protection.



- The minimum startup voltage of the unit must be kept above 90% of the rated voltage, the voltage during operation must be within $\pm 10\%$ of the rated voltage and the voltage difference among all phases shall be within $\pm 2\%$. Overvoltage or undervoltage will have adverse effect on the unit. Stable power supply shall be guaranteed and in case of unstable voltage, excessive current will be generated at the moment of unit startup for operation, and this may damage the unit motor.
- The unit maintenance and repair can only be conducted provided that the unit is shut down and it is disconnected with the power supply.
- In case of unit failure, it can only be started after causes for the failure are identified and eliminated and no forced startup shall be conducted before the failure is not eliminated.
- No short connection of the lines for the unit protection device shall be conducted. Otherwise, this may lead to the unit failure.
- The internal cables of the unit shall be protected properly to prevent the insulation layer from damage due to sharp objects. The wire and cable shall be kept far away from the heat source and they shall not be bent or twisted

• Air filter

The accumulated dust of the unit strainer shall be inspected regularly (twice for each month as recommended). Users who have installed differential pressure detector shall clean or replace the filter in case the final resistance reaches the specified value and TICA suggests that the final resistance value shall be:

specification of filtration efficiency	suggested final resistance (Pa)
G3	100-200
G4	150-250
M5-M6	250-300

• Heat exchanger

The coil fin, copper pipes, etc. of the heat exchanger shall be free from scratch or flattening due to impact. The coil shall be kept clean and the coil fin can be brushed and washed with the nylon brush. It shall be cleaned with the vacuum cleaner before brushing. In case of the compressed air, the coil may be cleaned with the high-pressure air pipe or nozzle. Upon the cleaning of the coil, its external surface shall be free from dust and the heat transfer effect of the internal surface shall reach its initial updating and heat transfer capacity. Besides the fin cleaning, internal incrustation shall be washed and removed from the coil after the coil has been used for 2~3 years. The cold water and hot water for the unit coil shall be softened water.

- The belt tightness shall be readjusted after the unit has operated for one week and the regular inspection shall be conducted every three months of operation in future.
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• Servicing of fan bearing:

For fans with the oil nozzle, the lubricating oil of matching specification shall be filled into the bearing regularly. In case that the users select the grease of the same designation for grease filling, they shall use the grease of the designation all the time.

- The validity of the lubricating grease depends on the grease type, revolving speed of bearings, bearing diameter and operating environment. Under normal conditions, the lubricating grease shall be replaced after the fan has operated for about 1,500 h; in case that the fan keeps 24-hour operation, the lubricating grease shall be replaced upon 500~700-hour operation.

- Methods for lubricating oil filling: the bearing shall keep rotating during the grease filling, and in case that a layer of fresh grease overflow from the dust cover, the grease filling may be stopped and the wind wheel shall be rotated quickly manually to discharge excessive grease.

- Check the sealing strip of the access door and the flexible joint of the air duct regularly (once per month), and timely replace them in case of air leakage.
- Other precautions:
 - 1) Clean the A/C only after turning off the unit and switching off the power supply, otherwise, you may get electrocuted or injured.
 - 2) Never conduct overhauling during unit operation.
 - 3) Never replace the fuse with a steel or copper wire. Please use the fuse of correct specification, otherwise, the unit may be damaged.
 - 4) Switch off the power supply and ask the retailer for guidance in case of any abnormality (e.g. scorched flavor). If the A/C unit is still used in such a case, it may be damaged and an electric shock or fire may occur. Maintenance can only be performed by professional maintenance personnel. All power supplies must be switched off before the devices are wired.
 - 5) Refer to the Installation Manual for other unmentioned matters.
- Note: The unit components (e.g. humidifier, runner heat recovery device, burner and spray system) must be operated, repaired and maintained as per their attached operation or maintenance manuals or user's manuals containing detailed regulations on operation, repair and maintenance if any.

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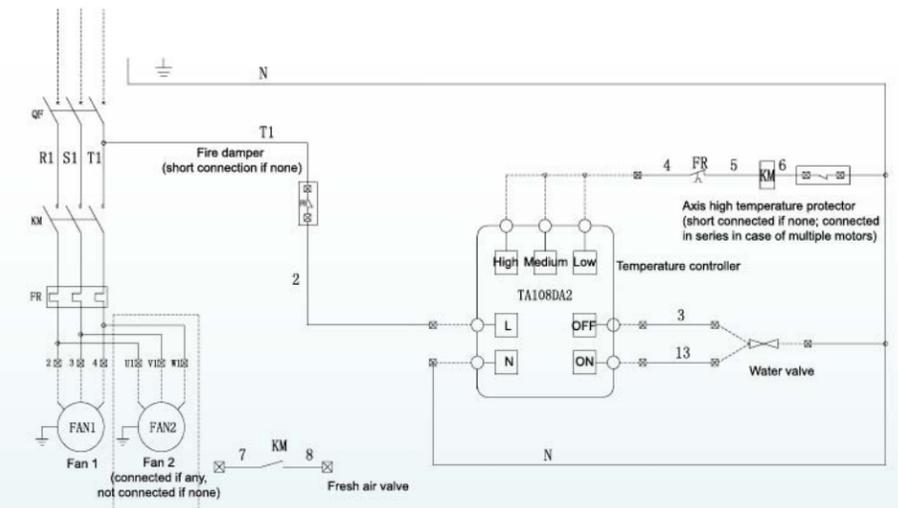
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When the motor power is greater than or equal to 11 kW, the motor is started in the star-delta mode, the control cabinet is supplied separately as an accessory, wires including the power supply incoming line of the control cabinet and the motor power supply line between the control cabinet and the motor are connected on site, and the temperature controller has been installed on the control cabinet panel.

Other instructions

Connecting the water valve is energy-saving, but never install the water valve in the full fresh air mode for the purpose of anti-frost protection.



Maintenance And Service

The air conditioning unit is an equipment and users are suggested to record the daily operation data of the equipment and to conduct regular maintenance and service.

1、 The following inspections shall be conducted properly before the use of the equipment:

◆ The power supply wiring of all indoor end equipment shall be inspected to confirm whether there is wrong wiring and whether the fan rotation is normal.

◆ The inspection shall be conducted to confirm whether all air valves at the inlet and outlet of the indoor end equipment are open.

◆ The inspection shall be conducted to confirm whether all power supply lines and control lines are connected in position and whether the wiring is correct according to the wiring diagram, whether the grounding is reliable and whether all connection terminals are secure.

2、 Daily maintenance during the equipment use:

Unit maintenance contents	Standard service cycle			Remarks
	Monthly	Quarterly	Half a year	
1、 The inspection shall be inspected to confirm whether the power line (from the distribution cabinet to the unit) is loose or damaged.			★	
2、 The inspection shall be conducted to confirm whether the condensate discharge is normal		★	●	Is the installation conducted according to the pipe connection diagram? Is it dirty or blocked? Is the drainage smooth? Is there any overflow, etc. due to this?
3、 The inspection shall be conducted to confirm whether there is abnormal noise during the operation of the unit.	★		●	For instance, sharp metal friction sound, whistlers, obvious clash or resonance, significant electromagnetic noise (disgusting) and other abnormal noise.
4、 The inspection shall be conducted to confirm whether it is necessary to clean the air side of heat exchanger (surface dust, sundries, etc.)		★	●	Spaces among fins are full of dust and there are sundries attached on the inlet side of the coil, etc.
5、 The inspection shall be conducted to confirm whether the air strainer is dirty or blocked and whether it is necessary to clean or replace the strainer.	★	●		The differential pressure alarm value and the scale value in the differential pressure gauge reach the final resistance value, etc.

3、 We recommend the following maintenance and service methods for the equipment which is not used for a long time

◆ In case that the unit does not operate for a long time or does not operate in winter, the power must be turned off and the water shall be discharged from the water system and the steam coil of the unit.

◆ If necessary, the maintenance and service may be conducted according to the pre-use maintenance and service methods of the equipment.

★ Note

1、 User service: mandatory inspection - ● recommended inspection - ★

2、 Vulnerable parts required for the service shall be purchased from TICA Air-Conditioning Co., Ltd.

3、 The service methods apply to the cycle during normal use and the arrangement shall be made based on actual conditions in case of use in bad conditions.