

AMRTA

Product Catalog

Medical Purificatory Modular AHU



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Our Aim: To Be The Air Handling Expert In Medical Industry

With national high requirement of indoor cleanliness control, test method put forward by Good Manufacturing Practice (GMP) and fully implementation of GMP, it is important for air conditioning manufacturer to control indoor air leakage ratio, suspended particles and contaminant concentration in medical industry.

To meet customer's requirement, constantly innovate and provide high quality air handling system, Amrta air combines years of HVAC technology experience and has launched another high efficient product. Medical purificatory Modular Air Handling Unit, which is of novel structure, perfect functions and lower leakage ratio.

Product Introduction

Medical Purificatory Modular Air Handling Unit is Amrta's latest product with low air leakage ratio, high mechanical strength in terms of special requirements of operating clean room and other clean rooms in the field of medical treatment, chemical, food. It can efficiently control transmission of bacteria and spread of disease. Various high performance parts are exclusively equipped.

The Medical Purificatory Modular Air Handling Unit has two series: one modular air handling unit with cooling coil for water and other with cooling coil for refrigerant.

Model Nomenclature

A M U 2 1 1 8 A H M H D 1 8 6 L E A
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱

Digit 1,2,3 - Unit Model

AMU=Air Handler Unit Modular Medical

Digit 4,5 - Width Model

Digit 6,7 - Height Model

Digit 8 - Design Sequence

A=First Design

B=Second Design

Digit 9 - Structure Type

H=Horizontal

V=Vertical

C=Celling

Digit 10 - Medical Purificatory Type (Refrigerant Coil)

M=Medical Purificatory

Digit 11 - Unit Application

Omitted=Cooling only

H=Heat Pump

I=ISO Thermal & ISO Humidity

Digit 12 - Expansion Type

D=Direct Expansion

Digit 13,14,15 - Unit Nominal Tonnage

186=186kW

Digit 16 - Water Pipe Connection Position

L=Left Side

R=Right Side

Digit 17 - Heating Type

E=Electric Heating

S=Steam Heating

Digit 18 - Panel Thickness

A=25mm

B=35mm

C=50mm

Model Nomenclature

A S 0 2 9 A H 2 D M
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Digit 1,2 - Unit Model

AS=Air Cooled Condenser Outside Unit

Digit 3,4,5 - Unit Nominal Capacity

012=12kW

014=14kW

Digit 6 - Design Sequence

A=First Design

B=Second Design

Digit 7 - Unit Application

Omitted=Cooling Only

H=Heat Pump

Digit 8 - Refrigerant Type

Omitted=R22

Digit 9 - Expansion Type

D=Direct Expansion

Digit 10 - Quantity of Unit

Omitted=Single

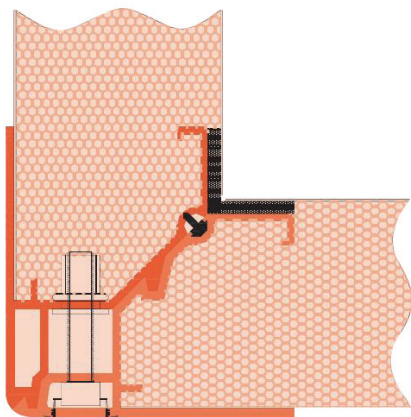
M=Multi

Unit Features

Medical Purificatory Modular Air Handling Unit is used for the clean room in medicine field. Its air conditioning system and equipment must apply special device to meet the requirement; there are some following features compared with normal air handling unit:

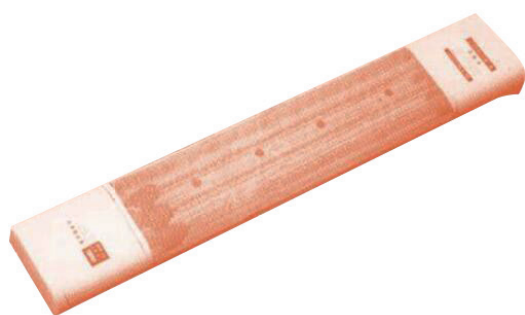
Low Air Leakage Ratio,High Mechanical Strength,Smooth Internal Surface

- The frame adopts patented air leakage proof design, embedded groove making foam materials connect both internal and external panels tightly.
- The foam material is high density polyurethane to make sure the strength of the panel.
- Air leakage proof seal + bolt and nut, improving the seal between panels.
- The internal panel is made of stainless steel with smooth surface to make sure there is no dust and no rust.

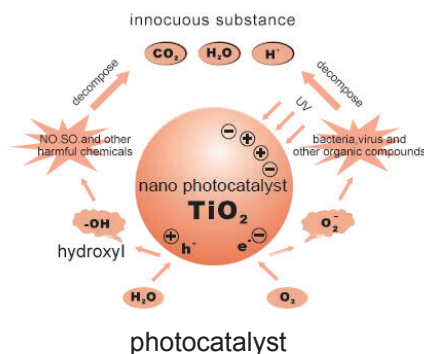


High Efficient Sterilization

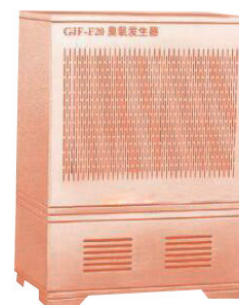
- The internal panel of the casing, condensing drainage tray and coil frame are all made of stainless steel. The heat exchanger is made of hydrophilic aluminum fan or copper fin to prevent bacteria.
- Stainless tilt big drainage tray design make sure the internal of the unit does not remain water and breed the bacteria.
- The unit is equipped with ultraviolet sterilizing lamp, photocatalyst, ozone generator and etc, effectively killing the bacteria and sterilizing, therefore improving the air quality.
- The unit is also equipped with electronic purification device adopting advanced electrostatic precipitation technology, thus totally preventing breed and transmission of bacteria and virus and protecting from infection.



Ultraviolet Sterilizing Lamp



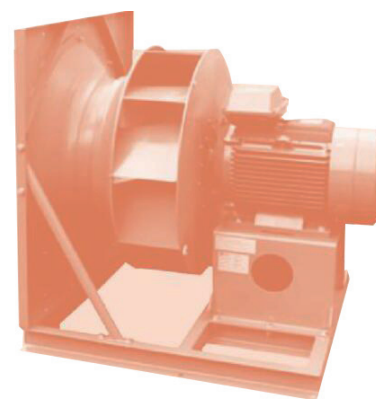
photocatalyst



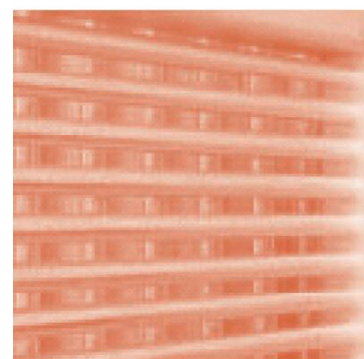
Ozone Generator

Advanced Internal Equipment

- Direct Driven and No Volute Frequency Conversion Fan
Using authoritative certificate and high efficient no volute frequency conversion fan with high transfer efficiency, no belt wear and stable operation. Meanwhile, the no volute fan is open-type structure and convenient to maintainance and clean, especially applied to the clear room.



- Naked Tube Heater
The heat exchang pipe of the heater is made of stainless steel, smooth surface, without spiral fin, preventing accumulation of dust and breeding of bacteria.

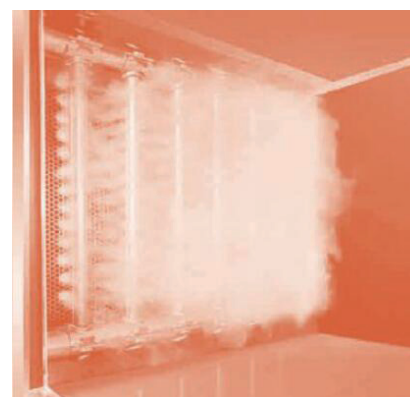


Unit Features

- Flexible and high-efficient antibacterial heat exchanger
The heat exchanger is designed by special computer auxiliary software, whose performance strictly meets the requirement of national standard of clean room. Hydrophilic aluminum fin or copper fin is applied, thus avoiding the air through the coil to take the condensing water covering on the surface of coil away. Meanwhile it also can prevent the breeding of bacteria.
Amrta provides coils with various specifications to meet different requirements of different customers.(different pitch of fins, various fin type, various copper tube diameters and materials for water collecting pipe.)



- **Steam-type Humidifier**
The unit uses electrode and dry steam to humidify, avoiding the humidified circumstance to keep from the breeding of bacteria.



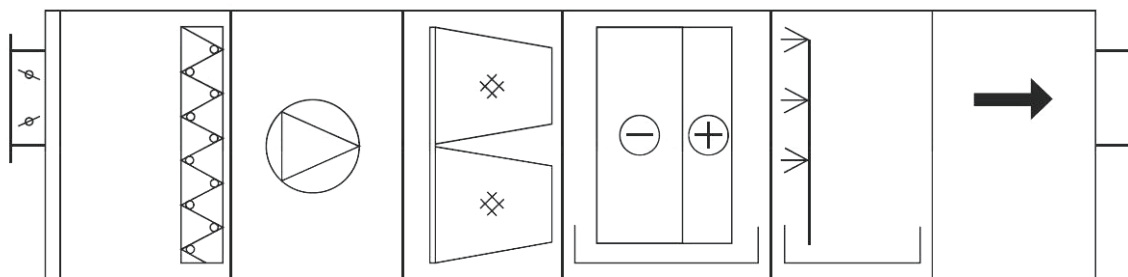
High Quality Filter

- The unit can use various filters with different degrees to meet customer's requirements, thus optimizing its performance.
- Filter is designed with special structure which is of high trapping efficiency and large volume. And it is easy to clean and change.
- Both plate filter and bag filter are put in the same frame to minimize the length of casing greatly.
- The filters from different manufacturers can be installed in the general fixed frame for filter. Frame galvanized and sprayed on the surface improves its anti-corrosion capacity. The surface of the metal plate is smooth enough without any sharp burr; the filter is near one by one and fixed by nuts, making it good airtight.



Optimized Design

- Fan placed in the front make sure the unit is under positive pressure to prevent the outside air from leaking, which will pollute the clear air in the unit. And the condensate water can be drained because of positive pressure.
- Areas where can produce water, such as filter protector placed in the front, heat exchanger, protect it from breeding of bacteria.



Air Volume Chart

Model AMU	Face velocity (m/s)	Air Volume (m³/h)							
		1.60	2.00	2.25	2.50	2.75	2.85	3.00	4.00
0606		1000	1250	1406	1563	1719	1781	1875	2500
0906		1741	2176	2448	2720	2992	3101	3264	4353
1206		2509	3136	3528	3920	4313	4469	4705	6273
0909		2736	3420	3847	4275	4702	4873	5130	6840
1209		3943	4929	5545	6161	6777	7023	7393	9857
1509		5150	6437	7242	8047	8851	9173	9656	12875
1212		5735	7169	8065	8961	9857	10216	10753	14338
1512		7490	9363	10534	11704	12875	13343	14045	18727
1812		9246	11558	13003	14448	15892	16470	17337	23116
2112		11002	13753	15472	17191	18910	19597	20629	27505
1515		9832	12290	13826	15362	16898	17513	18434	24579
1815		12136	15170	17066	18962	20859	21617	22755	30340
2115		14440	18050	20307	22563	24819	25722	27075	36101
2415		16745	20931	23547	26163	28780	29826	31396	41861
1919		15976	19970	22467	24963	27459	28458	29956	39941
2119		17878	22348	25141	27935	30728	31846	33522	44696
2419		20731	25914	29153	32393	35632	36928	38871	51828
2719		23584	29480	33165	36850	40535	42009	44220	58961
2222		22450	28063	31571	35079	38587	39990	42094	56126
2422		24718	30898	34760	38622	42484	44029	46346	61795
2722		28120	35150	39543	43937	48331	50088	52724	70299
3022		31521	39401	44327	49252	54177	56147	59102	78803
2525		29188	36485	41045	45606	50166	51990	54727	72969
2725		31748	39685	44646	49606	54567	56551	59527	79370
3025		35589	44486	50046	55607	61168	63392	66728	88971
3325		39429	49286	55447	61608	67768	70233	73929	98572
3625		43270	54087	60848	67608	74369	77074	81130	108174
3628		50687	63359	71279	79198	87118	90286	95038	126718
3928		55186	68982	77605	86228	94851	98300	103474	137965
4530		65749	82186	92460	102733	113006	117115	123279	164373
4830		70358	87947	98940	109934	120927	125324	131920	175894
4533		73576	91970	103467	114963	126459	131058	137956	183941
4833		78734	98417	110719	123021	135323	140244	147625	196834
4536		82969	103711	116675	129639	142603	147789	155567	207422
4836		88785	110981	124853	138726	152599	158148	166471	221961
5136		94600	118250	133031	147813	162594	168507	177375	236500
5436		100416	125520	141210	156900	172590	178866	188280	251039
5736		106231	132789	149388	165986	182585	189225	199184	265578
6036		112047	140059	157566	175073	192581	199584	210088	280117
6636		121020	151300	170200	189090	208000	215560	227000	300000

Cooling Capacity Performance Data

Model AMU	Nominal Air Volume (m ³ /h)	Fresh Air Condition						Return Air Condition					
		4Rows		6Rows		8Rows		4Rows		6Rows		8Rows	
		Sensible Heat kW	Total Heat kW	Sensible Heat kW	Total Heat kW	Sensible Heat kW	Total Heat kW	Sensible Heat kW	Total Heat kW	Sensible Heat kW	Total Heat kW	Sensible Heat kW	Total Heat kW
0606	1563	7.8	17.8	10.2	25	11.5	28.7	5.7	7.3	7.3	10.7	8.3	13
0906	2720	14	30	18	41	20	46	11	14	13	19	15	21
1206	3920	22	49	27	64	29	68	16	22	20	29	21	33
0909	4275	23	49	30	69	33	77	17	23	22	32	24	37
1209	6161	36	81	45	106	48	112	25	35	31	47	33	52
1509	8047	49	114	60	142	63	150	33	47	39	58	44	70
1212	8961	47	105	58	138	62	147	36	48	44	61	44	71
1512	11704	64	147	84	192	93	213	47	65	55	82	61	95
1812	14448	81	189	95	224	101	239	59	83	72	107	79	122
2112	17191	96	224	110	259	121	285	71	101	85	123	90	140
1515	15362	83	192	96	222	107	247	63	90	73	107	80	120
1815	18962	107	248	133	309	142	330	77	108	94	141	104	158
2115	22563	125	290	146	339	157	364	93	132	105	160	120	184
2415	26163	143	331	173	400	186	430	102	150	120	182	135	215
1919	24963	140	324	161	373	177	410	100	144	124	187	133	210
2119	27935	163	381	198	463	213	498	115	164	145	220	154	240
2419	32393	177	409	206	475	222	513	130	184	166	239	175	272
2719	36850	207	481	243	564	265	615	150	210	165	261	196	304
2222	35079	200	466	239	556	257	599	142	199	170	260	192	300
2422	38622	216	502	262	607	283	657	157	222	195	296	209	330
2722	43937	241	558	282	653	307	710	170	244	217	327	236	376
3022	49252	264	608	338	778	371	853	195	282	236	362	257	426
2525	45606	264	613	313	727	340	792	186	264	225	337	246	389
2725	49606	280	649	332	769	363	840	201	285	246	371	260	426
3025	55607	308	710	364	840	399	921	210	305	280	410	290	466
3325	67768	368	851	448	1078	503	1225	272	376	346	525	381	600
3625	74369	407	944	496	1195	556	1355	385	420	381	581	420	663
3628	87118	473	1095	577	1389	648	1578	443	487	444	676	490	772
3928	94851	518	1204	633	1525	710	1730	384	538	486	741	535	845
4530	113006	587	1336	767	1855	859	2094	466	658	576	876	620	965
4830	120927	634	1448	825	1995	922	2250	502	711	603	907	666	1041
4533	126459	549	1196	859	2075	961	2343	522	737	645	980	693	1080
4833	135323	593	1297	923	2232	1032	2518	562	796	675	1015	746	1165
4536	142603	615	1338	964	2327	1079	2632	585	825	705	1054	780	1212
4836	152599	664	1449	1036	2504	1160	2828	630	891	758	1138	838	1307
5136	162594	712	1562	1108	2680	1240	3025	674	958	812	1221	897	1402
5436	172590	761	1674	1181	2857	1321	3222	719	1025	865	1305	956	1497
5736	182585	810	1787	1253	3033	1401	3418	764	1092	919	1388	1014	1591
6036	192581	859	1899	1326	3211	1482	3615	808	1159	972	1472	1074	1686
6636	208000	943	2100	1447	3508	1614	3939	859	1213	1061	1615	1169	1843

Note:

1) Chilled water inlet / outlet temperature 7°C/12°C.

2) Return air condition: Inlet air 27°C DB /19.5°C WB, Fresh air condition: Inlet air 35°C DB/ 28°C WB.

3) The above data only for reference. If any changes of working condition or different coil circuit lead to different cooling capacity, please refer to Amrta for the detail.

4) All specifications are subject to change by the manufacturer without prior notice.

Hot Water Coil Performance Data

Model AMU	Nominal Air Volume (m³/h)	Fresh Air Condition				Return Air Condition			
		1Rows	2Rows	3Rows	4Rows	1Rows	2Rows	3Rows	4Rows
		Total Heat kW	Total Heat kW	Total Heat kW	Total Heat kW	Total Heat kW	Total Heat kW	Total Heat kW	Total Heat kW
0606	1563	5.3	11.7	14.9	18.6	4	9.4	11.9	15.1
0906	2720	13	22	30	36	11	17	25	29
1206	3920	21	33	45	53	16	27	38	43
0909	4275	21	34	48	56	18	27	39	47
1209	6161	32	51	70	83	26	43	59	69
1509	8047	43	70	95	111	35	57	79	92
1212	8961	47	76	104	122	38	62	86	102
1512	11704	62	100	138	160	50	82	115	133
1812	14448	77	127	171	198	64	104	143	166
2112	17191	93	150	204	233	76	123	168	197
1515	15362	75	133	182	210	60	109	150	176
1815	18962	94	167	226	261	77	136	186	218
2115	22563	115	200	270	308	94	163	221	257
2415	26163	136	234	310	359	111	193	261	300
1919	24963	133	220	297	344	112	181	246	288
2119	27935	153	247	334	383	125	203	279	319
2419	32393	178	290	384	444	146	237	324	372
2719	36850	195	332	440	509	168	273	364	424
2222	35079	192	310	411	481	157	257	350	401
2422	38622	212	345	457	530	175	286	381	442
2722	43937	234	395	518	612	200	322	435	508
3022	49252	262	428	573	676	215	367	487	567
2525	45606	239	408	538	626	205	337	450	528
2725	49606	262	429	590	684	216	369	492	572
3025	55607	297	482	665	764	242	415	551	639
3325	67768	332	539	730	849	268	444	616	709
3625	74369	367	594	794	921	299	487	673	781
3628	87118	430	698	928	1079	350	570	792	909
3928	94851	468	767	1005	1181	382	623	854	992
4530	113006	563	915	1213	1412	460	750	1029	1175
4830	120927	605	986	1306	1510	499	807	1082	1259
4533	126459	630	1030	1360	1574	523	848	1148	1321
4833	135323	645	1107	1462	1685	559	908	1234	1416
4536	142603	689	1163	1535	1774	593	959	1296	1491
4836	152599	731	1254	1665	1926	632	1035	1404	1603
5136	162594	793	1317	1783	2079	682	1120	1494	1731
5436	172590	857	1398	1922	2207	696	1206	1599	1860
5736	182585	917	1490	2059	2357	748	1291	1709	1987
6036	192581	980	1601	2188	2518	800	1316	1828	2116
6636	208000	1058	1729	2363	2720	864	1422	1975	2285

Note:

- 1) Hot water inlet / outlet 60°C/ 50°C.
- 2) Return air temperature 15°C DB, fresh air temperature 7°C DB.
- 3) The above data only for reference. If any changes of air intake condition, water in/out temperature lead to different heating capacity, please refer to Amrta for the detail.
- 4) All specifications are subject to change by the manufacturer without prior notice.

Specification Chart

Model	Indoor Unit			AMU0906A-MD-012	AMU0906A-MHD-012	AMU0906A-MD-014	AMU0906A-MHD-014	AMU0908A-MD-019	AMU0908A-MHD-019
	Outdoor Unit		Model	AS012AD	AS012AHD	AS014AD	AS014AHD	AS019AD	AS019AHD
			Qty	1	1	1	1	1	1
Rated Cooling Capacity			kw	12	12	14	14	19	19
Rated Heating Capacity			kw		13		16		21
Power Supply				380V/3N-/50HZ					
Refrigerant				R22					
Indoor unit	Air Volume		m³/h	2500		3000		4200	
	Outline Dimension	Width	mm	950		950		950	
		Height	mm	730		730		930	
		Length	mm	Depends On the Module Amount of Sections					
Outdoor unit	Compressor Type*Qty			Scroll *1				Scroll *2	
	Cooling Input Power		kW	4.25	4.25	4.9	4.9	6.96	6.96
	Heating Input Power		kW		3.85		4.55		6.4
	Weight		kg	120	120	120	120	215	223
	Outline Dimension	Length	mm	940		940		1403	
		Width	mm	400		400		821	
		Height	mm	1243		1243		980	
	Piping Dimension	Liquid Pipe	mm(in)	9.52(3/8)		9.52(3/8)		2*12.7(1/2)	
		Gas Pipe	mm(in)	19.05(3/4)		19.05(3/4)		2*19.05(3/4)	
Model	Indoor Unit			AMU0909A-MD-026	AMU0909A-MHD-026	AMU1209A-MD-030	AMU1209A-MHD-030	AMU1409A-MD-037	AMU1409A-MHD-039
	Outdoor Unit		Model	AS026AD	AS026AHD	AS030AD	AS030AHD	AS037AD	AS037AHD
			Qty	1	1	1	1	1	1
Rated Cooling Capacity			kw	26.5	26.5	30	30	37	37
Rated Heating Capacity			kw		28		34		41
Power Supply				380V/3N-50HZ					
Refrigerant				R22					
Indoor unit	Air Volume		m³/h	5000		6500		7500	
	Outline Dimension	Width	mm	950		1250		1450	
		Height	mm	1030		1030		1030	
		Length	mm	Depends on the Module Amount of Sections					
Outdoor unit	Compressor Type*Qty			Scroll *2				Scroll *2	
	Cooling Input Power		kW	8.5	8.5	10.2	10.2	11.6	11.6
	Heating Input Power		kW		7.8		10		11..2
	Weight		kg	232	240	252	260	305	315
	Outline Dimension	Length	mm	1403		1558		1558	
		Width	mm	821		882		882	
		Height	mm	980		1170		1170	
	Piping Dimension	Liquid Pipe	mm(in)	2*12.7(1/2)		2*12.7(1/2)		2*12.7(1/2)	
		Gas Pipe	mm(in)	2*19.05(3/4)		2*19.05(3/4)		2*22.2(7/8)	

Specification Chart

Model	Indoor Unit			AMU1511A-MD-050	AMU1511A-MHD-050	AMU1512A-MD-062	AMU1512HA-MHD-062	AMU1812A-MHD-076	AMU1812HA-YX-076
	Outdoor Unit		Model	AS050AD	AS050AHD	AS062AD	AS062AHD	AS037ADM	AS037AHDM
			Qty	1	1	1	1	2	2
Rated Cooling Capacity			kw	50	50	62	62	74	74
Rated Heating Capacity			kw		56		68		82
Power Supply				380V/3N-/50HZ					
Refrigerant				R22					
Indoor Unit	Air Volume		m³/h	10000		12000		15000	
	Outline Dimension	Width	mm	1550		1550		1850	
		Height	mm	1230		1330		1330	
		Length	mm	Depends on the Module Amount of Sections					
Outdoor Unit	Compressor Type*Qty			Scroll *2				Scroll *3	
	Cooling Input Power		kW	17.6	17.6	19.8	19.8	11.6	11.6
	Heating Input Power		kW		16.5		18.6		11.2
	Weight		kg	480	492	532	544	305	315
	Outline Dimension	Length	mm	1808		1808		1558	
		Width	mm	1090		1090		882	
		Height	mm	1190		1190		1170	
	Piping Dimension	Liquid Pipe	mm(in)	2*15.88(5/8)		2*15.88(5/8)		2*12.7(1/2)	
		Gas Pipe	mm(in)	2*28.6(1-1/8)		2*28.6(1-1/8)		2*22.2(7/8)	

Model	Indoor Unit			AMU2114A-MD-102	AMU2114A-MHD-102	AMU2018A-MD-125	AMU2018A-MHD-125	AMU2121A-MD-152	AMU2121A-MHD-152
	Outdoor Unit		Model	AS050ADM	AS050AHDM	AS062ADM	AS062AHDM	AS050ADM	AS050AHDM
			Qty	2	2	2	2	3	3
Rated Cooling Capacity			kw	102	102	125	125	152	152
Rated Heating Capacity			kw		110		128		160
Power Supply				380V/3N-50HZ					
Refrigerant				R22					
Indoor Unit	Air Volume		m³/h	20000		24000		30000	
	Outline Dimension	Width	mm	2150		2050		2170	
		Height	mm	1530		1930		2270	
		Length	mm	Depends on the Module Amount of Sections					
Outdoor Unit	Compressor Type*Qty			Scroll *2					
	Cooling Input Power		kW	17.6	17.6	19.8	19.8	17.6	17.6
	Heating Input Power		kW		16.5		18.6		16.5
	Weight		kg	480	492	532	544	480	492
	Outline Dimension	Length	mm	1808		1808		1808	
		Width	mm	1090		1090		1090	
		Height	mm	1190		1190		1190	
	Piping Dimension	Liquid Pipe	mm(in)	2*15.88(5/8)		2*15.88(5/8)		2*15.88(5/8)	
		Gas Pipe	mm(in)	2*28.6(1-1/8)		2*28.6(1-1/8)		2*28.6(1-1/8)	

Specification Chart

Model	Indoor Unit			AMU2521A-MD-186	AMU2521A-MHD-186	AMU2721A-MD-235	AMU2721A-MHD-235	AMU2824A-MD-272	AMU2824A-MHD-272
	Outdoor Unit	Model		AS062ADM	AS062AHD	AS235AD	AS235AHD	AS272AD	AS272AHD
		Qty	3	3	1	1	1	1	
Rated Cooling Capacity		kw	186	186	235	235	272	272	
Rated Heating Capacity		kw		192		273		315	
Power Supply			380V/3N-/50HZ						
Refrigerant			R22						
Indoor Unit	Air Volume		m³/h	37500			40000		50000
	Panel Thickness		mm	35					
	Outline Dimension	Width	mm	2570			2770		2870
		Height	mm	2270			2270		2570
		Length	mm	Depends on the Module Amount of Sections					
Outdoor Unit	Compressor Type*Qty			Scroll *2		Semi-hermetic Screw Type*1			
	Cooling Input Power		kW	19.8	19.8	75.3	75.3	82.8	82.8
	Heating Input Power		kW		18.6		68.5		75.2
	Weight		kg	532	544	2580	2650	2780	2850
	Outline Dimension	Length	mm	1808			2940		3100
		Width	mm	1090			2232		2232
		Height	mm	1190			2370		2370
	Piping Dimension	Liquid Pipe	mm(in)	2*15.88(5/8)			28.6(1-1/8)		34.9(1-3/8)
		Gas Pipe	mm(in)	2*28.6(1-1/8)			66.68(2-5/8)		79.4(3-1/8)
Model	Indoor Unit			AMU3027A-MD-325	AMU3027A-MHD-325	AMU3427A-MD-372	AMU3427A-MHD-372	AMU3530A-MD-451	AMU3530HA-MHD-451
	Outdoor Unit	Model		AS325AD	AS325AHD	AS372AD	AS372AD	AS451AD	AS451AHD
		Qty	1	1	1	1	1	1	
Rated Cooling Capacity		kw	325	325	372	372	451	451	
Rated Heating Capacity		kw		375		430		520	
Power Supply			380V/3N-50HZ						
Refrigerant			R22						
Indoor Unit	Air Volume		m³/h	60000			70000		80000
	Outline Dimension	Width	mm	3100			3500		3600
		Height	mm	2900			2900		3200
		Length	mm	Depends on the Module Amount of Sections					
Outdoor Unit	Compressor Type*Qty			Semi-hermetic Screw Type*1					
	Cooling Input Power		kW	105.7	105.7	118	118	139.9	139.9
	Heating Input Power		kW		97		108.2		127.5
	Weight		kg	3570	3650	3660	3740	4100	4200
	Outline Dimension	Length	mm	4040			4040		4040
		Width	mm	2232			2232		2232
		Height	mm	2500			2500		2880
	Piping Dimension	Liquid Pipe	mm(in)	34.9(1-3/8)			34.9(1-3/8)		41.3(1-5/8)
Gas Pipe		mm(in)	79.4(3-1/8)			79.4(3-1/8)		92(3-5/8)	

Note:

Rated cooling capacity is measured at indoor 27°C DB/19°C WB, outdoor 35°C DB.

Rated heating capacity is measured at indoor 20°C DB, outdoor 7°C DB/6°C WB.

Rated cooling capacity doesn't take heat producing loss of indoor fan motor into consideration.

External static pressure could be provided by the user.

All specifications are subject to change by the manufacturer without prior notice.

Isothermal&Isohumidity Unit Specification Chart

Model	Indoor Unit		AMU0909A-MID	AMU1209A-MID-0029	AMU1409A-MID-037	AMU1511A-MID-048	AMU1512A-MID-059	
	Outdoor Unit	Model	AS025AD	AS029AD	AS037AD	AS048AD	AS059AD	
		Qty	1	1	1	1	1	
Rated Cooling Capacity		kw	25.2	29	35.5	48	59	
Electric Heating Capacity		kw	16	20	24	28	32	
Humidification Volume		kg/h	8	10	13	18	22	
Power Supply			380V/3N-/50HZ					
Refrigerant			R22					
Indoor Unit	Air Volume		m³/h	5000	6500	7500	10000	12000
	Outline Dimension	Width	mm	950	950	1450	1550	1550
		Height	mm	1030	1030	1030	1230	1330
		Length	mm	Depends on the Module Amount of Sections				
Outdoor Unit	Compressor Type*Qty		Scroll *2		Scroll *2	Scroll *3		
	Cooling Input Power		kW	8.5	10.2	11.6	17.6	19.8
	Weight		kg	232	252	305	480	532
	Outline Dimension	Length	mm	1403	1558	1558	1808	1808
		Width	mm	821	882	882	1090	1090
		Height	mm	980	1170	1170	1190	1190
	Piping Dimension	Liquid Pipe	mm(in)	2*12.7(1/2)	2*12.7(1/2)	2*12.7(1/2)	2*15.88(5/8)	2*15.88(5/8)
		Gas Pipe	mm(in)	2*19.05(3/4)	2*19.05(3/4)	2*22.2(7/8)	2*28.6(1-1/8)	2*28.6(1-1/8)

Model	Indoor Unit			AMU1812A-MID-073	AMU2114A-MID-97	AMU2018A-MID-120	AMU2121A-MID-146	AMU2521A-MID-176
	Outdoor Unit		Model	AS037ADM	AS048ADM	AS059ADM	AS048ADM	AS176ADM
			Qty	2	2	2	3	1
Rated Cooling Capacity			kw	71	97	120	146	176
Electric Heating Capacity			kw	38	50	65	75	100
Humidification Volume			kg/h	25	35	43	54	60
Power Supply				380V/3N-50HZ				
Refrigerant				R22				
Indoor Unit	Air Volume		m³/h	15000	20000	24000	30000	37500
	Outline Dimension	Width	mm	1850	2150	2050	2170	2570
		Height	mm	1330	1530	1930	2270	2270
		Length	mm	Depends On the Module Amount of Sections				
	Outdoor Unit	Compressor Type*Qty			Scroll *2	Scroll *2		Scroll *3
Cooling Input Power		kW	11.6	17.6	19.8	17.6	62.1	
Weight		kg	305	480	532	480	2050	
Outline Dimension		Length	mm	1558	1080	1808	1808	2340
		Width	mm	882	1090	1090	1090	2232
		Height	mm	1170	1190	1190	1190	2270
Piping Dimension		Liquid Pipe	mm(in)	2*12.7(1/2)	2*15.88(5/8)	2*15.88(5/8)	2*15.88(5/8)	28.6(1-1/8)
		Gas Pipe	mm(in)	2*22.2(7/8)	2*28.6(1-1/8)	2*28.6(1-1/8)	2*28.6(1-1/8)	53.97(2-5/8)

Isothermal&Isohumidity Unit Specification Chart

Isothermal&Isohumidity Unit Specification Chart

Model	Indoor Unit		AMU2721A-MID-225	AMU2824A-MID-258	AMU3027A-MID-310	AMU3427A-MID-355	AMU3530A-MID-430	
	Outdoor Unit	Model	AS225AD	AS258AD	AS310AD	AS355AD	AS430AD	
		Qty	1	1	1	1	1	
Rated Cooling Capacity		kw	225	258	310	355	430	
Electric Heating Capacity		kw	120	140	160	180	220	
Humidification Volume		kg/h	65	80	90	100	120	
Power Supply			380V/3N-/50HZ					
Refrigerant			R22					
Indoor Unit	Air Volume		m³/h	40000	50000	60000	70000	80000
	Outline Dimension	Width	mm	2770	2870	3100	3500	3000
		Height	mm	2270	2570	2900	2900	3200
		Length	mm	Depends on the Module Amount of Sections				
Outdoor Unit	Compressor Type*Qty		Semi-hermetic Screw*1					
	Cooling Input Power		kW	75.3	82.8	105.7	118	139.9
	Weight		kg	2580	2780	3570	3660	4100
	Outline Dimension	Length	mm	2940	3100	4040	4040	4040
		Width	mm	2232	2232	2232	2232	2232
		Height	mm	2370	2370	2500	2500	2880
	Piping Dimension	Liquid Pipe	mm(in)	28.6(1-1/8)	34.9(1-3/8)	34.9(1-3/8)	34.9(1-3/8)	41.3(1-5/8)
		Gas Pipe	mm(in)	66.68(2-5/8)	79.4(3-1/8)	79.4(3-1/8)	79.4(3-1/8)	92(3-5/8)

Note:

Rated cooling capacity is measured at indoor 23°C DB/17°C WB, outdoor 35°C DB.

Rated cooling capacity doesn't take heat producing loss of indoor fan motor into consideration.

External static pressure could be provided by the user.

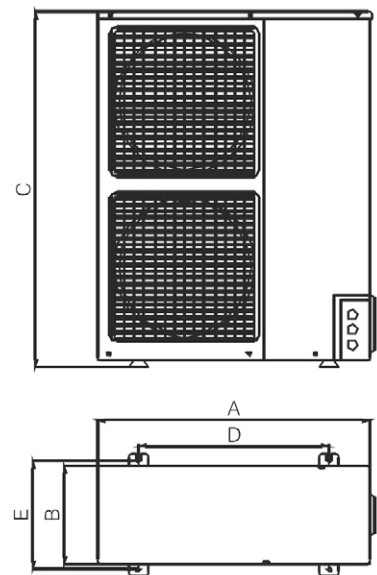
All specifications are subject to change by the manufacturer without prior notice.

Outdoor Unit Outline

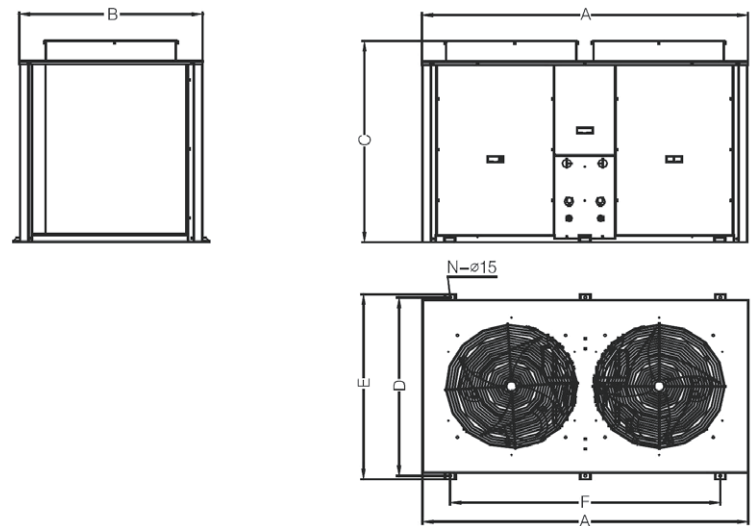
	AS012A(H)D/AS014A(H)D
A	940
B	350
C	1243
D	590
E	380

Outdoor Unit Outline

AS012A(H)D/AS014A(H)D



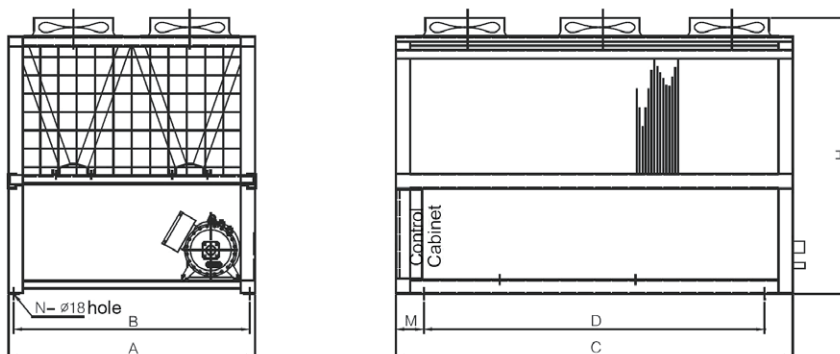
AS019/026/030/039A(H)D
AS039A(H)M/050A(H)D/050A(H)M/062A(H)D/062(H)AM



Model	A	B	C	D	E	F	N
AS019A(H)D	1403	746	980	781	821	770	4
AS026A(H)D	1403	746	980	781	821	810	4
AS030A(H)D	1558	808	1170	842	882	880	4
AS039A(H)D/A(H)M	1558	808	1170	842	882	880	4
AS050A(H)D/A(H)M	1808	1018	1190	1050	1090	750*2=1500	6
AS062A(H)D/A(H)M	1808	1018	1190	1050	1090	750*2=1500	6

Isothermal&Isohumidity Unit Outline Dimension

AS176/AS225/258/310/355/430A(H)D



AS \ Dimension	A	B	C	D	H	M	N
176A(H)D	2232	2150	2340	890x2=1780	2270	280	6
225A(H)D	2232	2150	2940	840x3=2520	2370	210	8
258A(H)D	2232	2150	3100	860x3=2580	2370	260	8
310A(H)D	2232	2150	4040	1000x3=3000	2500	520	8
355A(H)D	2232	2150	4040	1000x3=3000	2500	520	8
430A(H)D	2232	2150	4040	1000x3=3000	2880	520	8

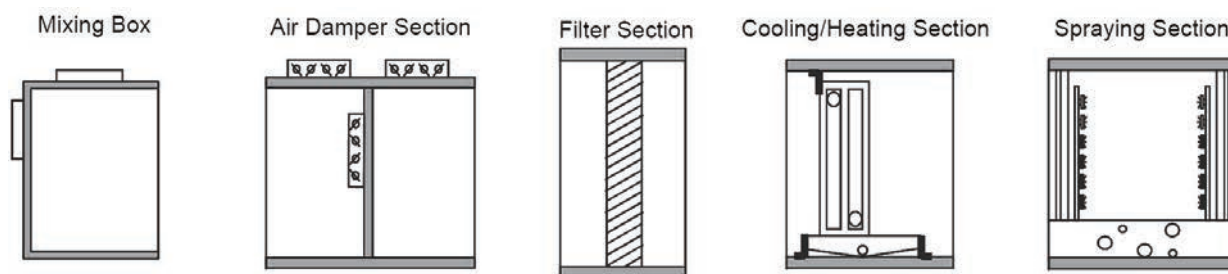
Air-cooled Unit Safe Operation Condition

	Cooling	Heating
Indoor Return Air Temperature	18-32°C	10-30°C
Outdoor Ambient Temperature	18-45°C	-10-25°C

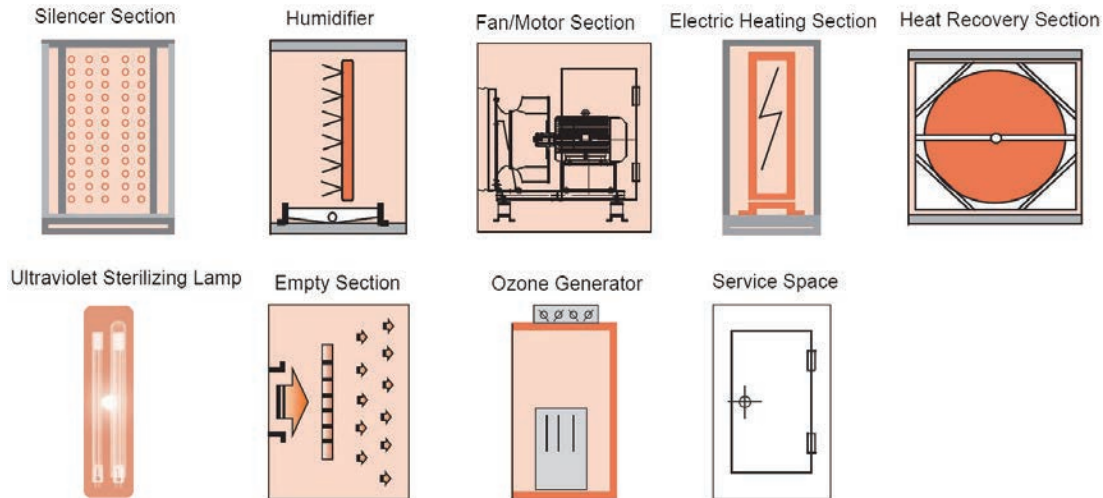
Note: 1. If the site temperature is out of the operation range, the unit protection device will be triggered.
2. If the condition doesn't fulfill, the unit need to be redesigned and customized to suit special application.

Functional Sections Schematic Diagram

Amrta medical purificatory modular air handling unit could provide you with different air handling functional sections, such as mixing box, air damper section, primary filter, sub-HEPA, HEPA, cooling coil, hot water coil, steaming heating coil, spraying section, humidifier, electronic purification, ultraviolet sterilizing lamp, ozone generator, rotary dehumidifier, heat recovery section, electric heating section, fan & motor section and etc. User could choose a reasonable combination according to different requirements. We will manufacture the product with optimal performance to control the temperature, humidification and cleaning degree.

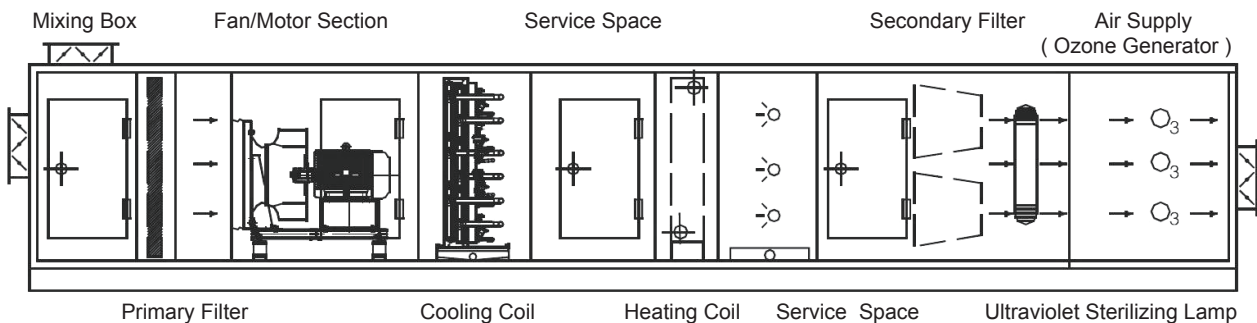


Functional Sections Schematic Diagram

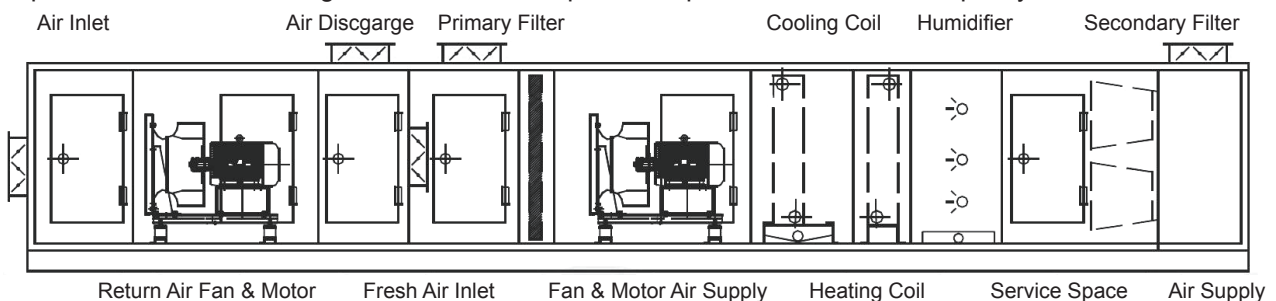


Normal Function Sections Combination

- Normal functional combination of medical purificatory modular air handling unit (mixing box + primary filter + fan & motor + cooling coil + service space + heating + humidifier + service space + secondary filter/ultraviolet sterilizing lamp + air supply/ozone generator).The unit is equipped with primary and secondary filter where there is the ultraviolet sterilizing lamp, effectively killing the bacteria after the filter section. An ozone generator is installed in the air supply section, tremendously improving the indoor air quality.

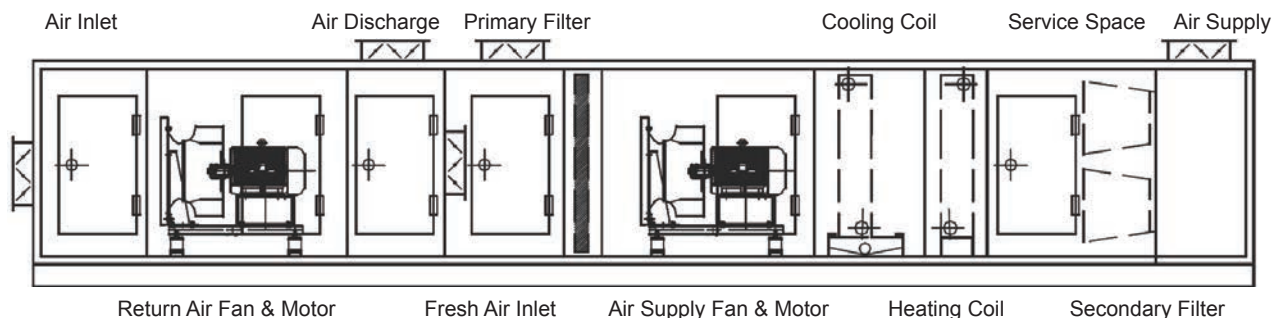


- Normal combination in the clean room of pharmaceutical factory (air inlet + return air fan & motor + air discharge + fresh air inlet + primary filter + air supply fan & motor + cooling coil + heating coil + humidifier + service space + secondary filter/ultraviolet sterilizing lamp + air outlet) Both return air fan and air discharge fan are working at the same time. The air then is discharged through the air damper which can handle large air volume and improve the purification and filter capacity.

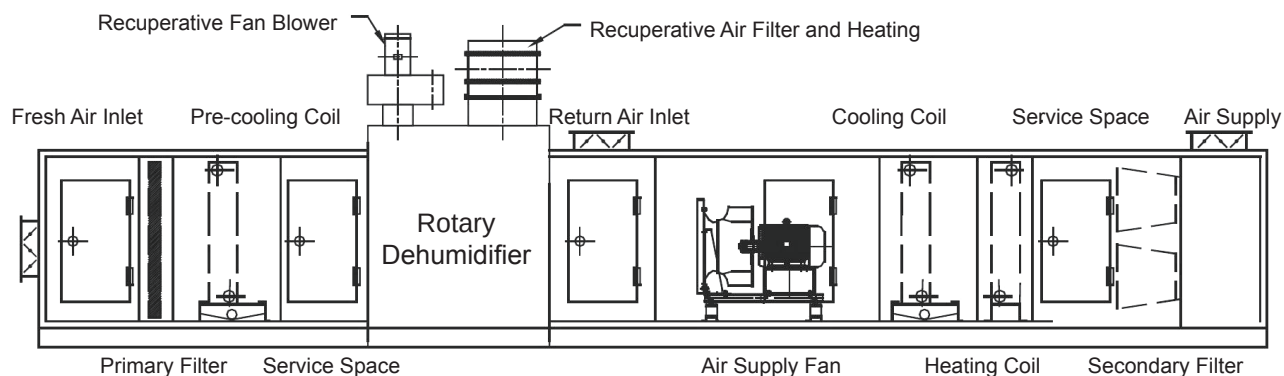


Normal Function Sections Combination

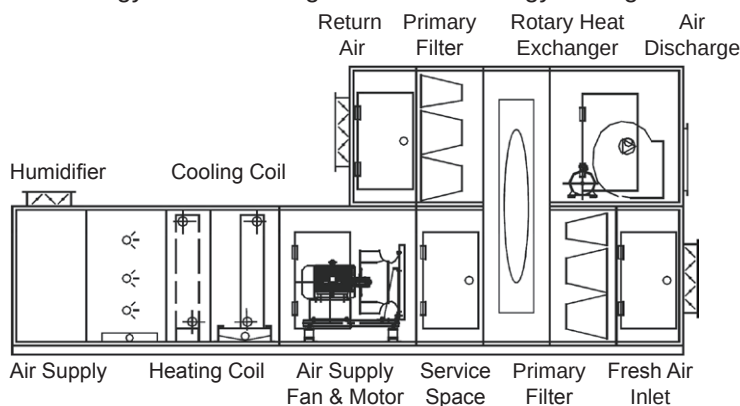
- Normal combination in the clean room of pharmaceutical factory
(air inlet + return air fan & motor + air discharge + fresh air inlet + primary filter + air supply fan & motor + cooling coil + heating coil + service space + secondary filter/ultraviolet sterilizing lamp + air outlet) The unit is basically equipped with cooling and heating devices without humidifier, and widely applied where is no need of humidification.



- Normal combination in the clean room of pharmaceutical factory
(fresh air inlet + primary filter + pre-cooling coil + service space + rotary dehumidifier + return air + air supply fan & motor + cooling coil + heating coil + service space + secondary filter + air supply) The unit is basically equipped with cooling coil section and heating coil, otherwise there is a rotary dehumidifier applied where need dehumidification.



- Normal combination with heat recovery
(upper layer: return air + primary filter + rotary heat exchanger + air discharge) (lower layer: fresh air + primary filter + rotary heat exchanger + service space + air supply + cooling coil + heating coil + humidifier + air supply)
The unit is attached with heat recovery device which is used to exchange the heat between the fresh air and return air, making full use of the energy of air discharge to achieve energy-saving.

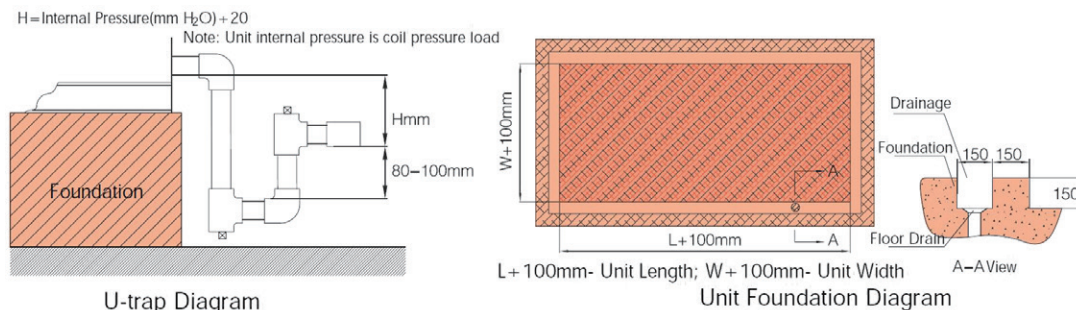


Function Section Length and Weight Chart (Casing)

Model AMU	Cabinet's Empty Section Weight (kg)														
	Panel Thickness 25mm					Panel Thickness 35mm					Panel Thickness 50mm				
	End Panel	300	600	900	1200	End Panel	300	600	900	1200	End Panel	300	600	900	1200
0606	4	25	38	52	72	5	27	40	55	76	6	32	47	62	86
0906	6	31	49	66	84	7	31	50	68	87	8	34	55	76	97
1206	8	33	53	72	91	9	34	54	74	94	10	37	60	83	106
0909	9	38	58	77	96	10	39	59	79	99	10	42	65	88	111
1209	12	40	62	83	104	13	41	63	85	107	13	45	70	96	121
1509	14	43	66	88	111	15	44	67	91	115	16	48	75	103	131
1212	15	48	71	93	116	16	49	72	96	120	17	53	81	108	136
1512	18	50	75	99	123	19	51	76	102	128	20	56	86	116	146
1812	21	52	78	105	131	23	53	81	108	136	24	59	91	123	156
2112	25	55	82	110	138	26	56	85	114	144	27	61	96	131	166
1515	23	57	84	110	136	23	58	86	113	141	24	64	96	128	161
1815	27	60	88	115	143	27	61	90	119	149	29	67	101	136	171
2115	31	62	91	121	151	32	63	94	125	156	33	69	106	143	180
2415	35	64	95	127	158	36	66	98	131	164	37	72	112	151	190
1919	35	70	101	132	162	36	72	104	136	168	37	78	117	155	194
2119	38	72	103	135	167	39	73	106	140	174	40	80	120	160	200
2419	43	74	107	141	174	44	76	111	146	181	45	83	125	168	210
2719	50	76	111	147	182	49	78	115	152	189	51	86	131	175	220
2222	47	80	114	148	182	46	81	117	153	189	48	89	132	175	218
2422	51	81	116	152	187	50	83	120	157	194	52	91	136	180	225
2722	57	84	120	157	194	56	85	124	163	202	58	94	141	188	235
3022	63	86	124	163	201	62	88	128	168	210	63	97	146	195	245
2525	59	89	127	164	202	59	91	130	170	210	60	100	148	195	243
2725	65	91	129	168	206	63	93	133	174	215	65	102	151	200	250
3025	72	93	133	174	214	69	95	137	180	223	71	105	156	208	259
3325	79	95	137	179	221	76	98	142	185	231	78	108	161	215	269
3625	86	98	141	185	228	82	100	146	191	239	84	110	167	223	279
3628	95	105	150	196	241	91	107	155	202	251	94	118	177	235	294
3928	104	107	154	201	248	99	110	159	208	259	101	121	182	243	304
4530	122	117	168	220	271	120	120	174	228	283	123	132	199	266	333
4830	135	119	172	225	278	128	122	178	234	291	131	135	205	274	343
4533	133	124	177	230	283	132	127	183	239	296	134	140	210	279	348
4833	147	126	181	236	291	140	129	187	245	304	143	143	215	286	358
4536	144	131	186	241	296	143	134	192	250	309	146	148	220	292	363
4836	159	134	190	247	303	152	137	196	256	317	155	151	225	299	373
5136	171	136	194	252	310	161	139	200	262	325	164	154	230	307	383
5436	181	138	198	258	318	170	142	205	268	333	173	157	236	314	393
5736	191	141	202	264	325	179	144	209	274	340	182	160	241	322	402
6036	200	143	206	269	332	188	146	213	280	348	191	163	246	329	412
6636	220	158	227	296	365	207	161	234	308	383	210	180	271	362	453

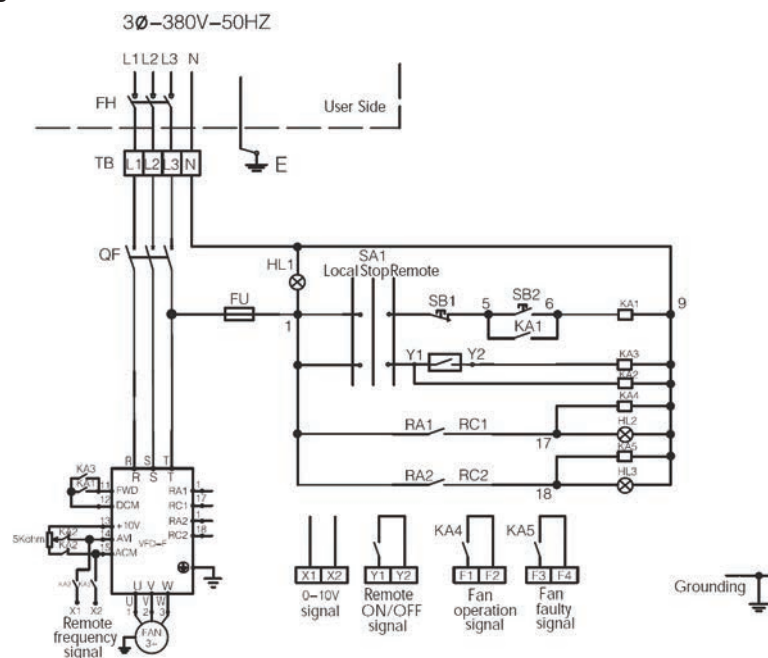
Unit Installation

- Ensure the unit installation base ground is leveled.
- Leave sufficient space around the unit especially for piping installation and servicing panel side.(Proposed not less than 1m), for daily maintenance application.
- To avoid air leak from condensation drain pipe, a U-trap must be applied before connecting with the external installed pipe.
- Please connect the piping according to the factory operation guide label of the unit. During connection, apply an even force and not exceed force to avoid damage done to the internal structure of the unit.
- Standard power supply is 380V/50Hz three phases with four wire. Before connecting the input power supply, make sure the supply voltage fulfill the label requirement. No phase shortage and unstable supply voltage allowed. Check whether the blowing wheel is rotating in the correct direction.
- All the motors should be equipped with an overload protector.
- Flexible connector should be applied on the external duct and water pipe connection to avoid any vibration transmission.



Wiring

Variable Frequency Control Box



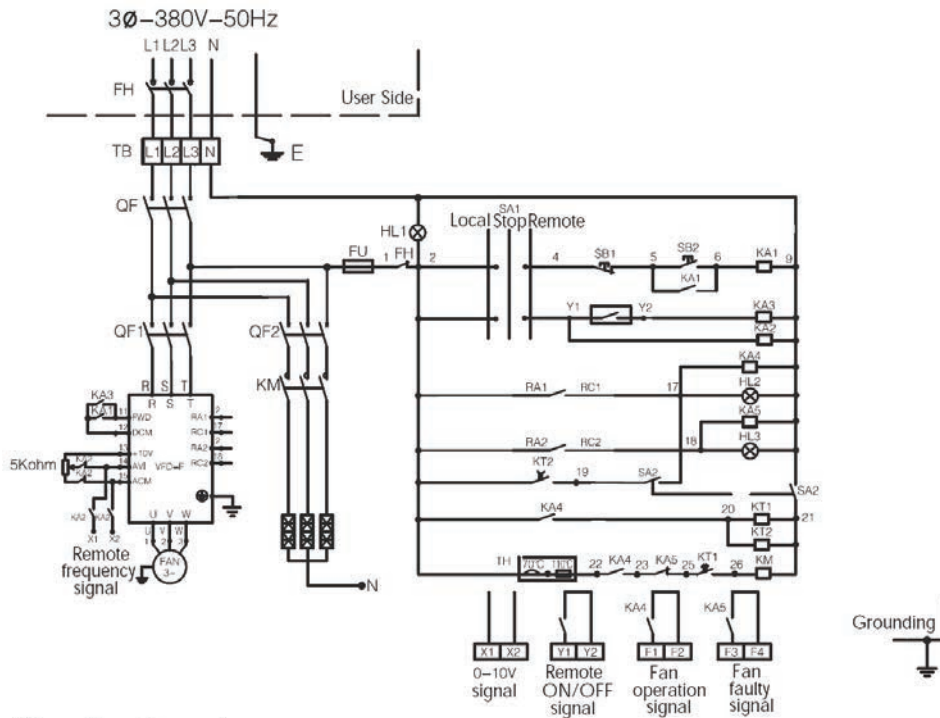
Note: Dotted Line--User Connection

QF: Low Voltage Circuit Breaker SB1: Stop Button SB2: Start Button FU: Fuse VFD-F: Delta Converter KA: Indimmediate Relay
HL1: Power Indicator Lamp HL2:Running Indicator Lamp HL3:Faulty Indicator Lamp SA: Switch FAN: Fan Motor

Wiring

The electrical heater provides as a frame structural, complete internal wiring and with standby power supply socket that according to the unit label instruction. For electrical heater control wiring, please refer to below diagram.

Variable Frequency Control Box with Electric Heater



Note: Dotted Line--User Connection

QF-Low Voltage Circuit Breaker VFD-F: Delta Converter SB1- Stop Button SB2- Start Button FU: Fuse FH-Fire Proof Valve
KM: Contractor KT2- Off Delay Time Relay KT1- On Delay Time Relay KA-Intermediate Relay HL1: Power Indicator Lamp HL2:Running
Indicator Lamp HL3 :Faulty Indicator Lamp SA: Switch FAN: Fan Motor
During power on, the on delay timer relay set as minimum 30 seconds, else the off delay timer set as minimum 180 seconds

Warning: Electrical heater thermostat must be connected with the blower motor and electrical heater interlocking control circuit, no circuit is allowed. After fan motor operating normally, then the electrical heater will be activated. When the unit stops, electrical heater cut off first for 3 minutes, then the blower motor will stop.

In the control design, the humidifier and other components' wiring diagram will refer to unit wiring diagram. Take attention for: Humidifier and other components must interlock with fan motor. When the motor starts, then the humidifier can be activated; else after cut off the humidifier then can stop the fan motor.

If the unit's air discharge outlet and air duct are provided with electrical air damper, the air damper must cut in first before the motor operating. Else, the motor stop operating, then the air damper can close. It will ensure then fan blower operates the air damper of the duct is under normal condition.

Warning: All electrical components must comply with the safety grounding, no neutral grounding is allowed. Wrong wiring will lead to explosion, fire and body injure!

Warning: Must ensure the steam coil will close the steam valve before the fan blower stop operating!

Operation & Maintenance

- Before the unit operation, check the water pipe valves system and duct equipment. Make sure everything is under good condition.
- Check the fan motor and blower moving parts regularly for their connection, operation and rotating direction. Readjust it if necessary.
- Washable primary filter should be washed either by clean water or detergent according to surrounding environment's cleanliness level.
- Secondary filter should be changed or washed when the air flow resistance becomes double of that at the initial stage.
- During winter, coil water should be drained out if not operating. If the unit needs to operate during winter time, make sure when the unit stops running, the coil water must circle the system and the fresh air damper must be closed to prevent coil freezing. If the unit stops operation for a long duration, coil water must be drained out.
- Clean soft water must be used for chilled water and hot water system. Every two years, water chemical treatment must be performed to eliminate the contamination in the system and apply compressed air or water for cleaning the fin coil surface.

For more details about installation, operation, maintenance and etc, please refer to the product catalog!

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