Modular Air Handling Unit

FEATURES

NO COLD BRIDGE
Double panels fitted with high pressure PU foam and specially designed insulation method to isolate all metal surfaces inside the air handling unit from outside air which eliminate the possibility of cold bridge. Therefore, no condensation will happen and at the same time minimize loss of energy.

PANEL STRUCTURE DESIGN
Panel is made of powder coated double steel (outer and inner both) with high pressure polyurethane foam fitting in between, thus offering a rigid and robust panel.
Frame is made of aluminum alloy which is fastened to the panel, as a result, the unit is strong and lightweight.

LOW AIR LEAKAGE
Thanks to the high pressure PU foam fitting, and special design insulation method to guarantee no low air leakage.

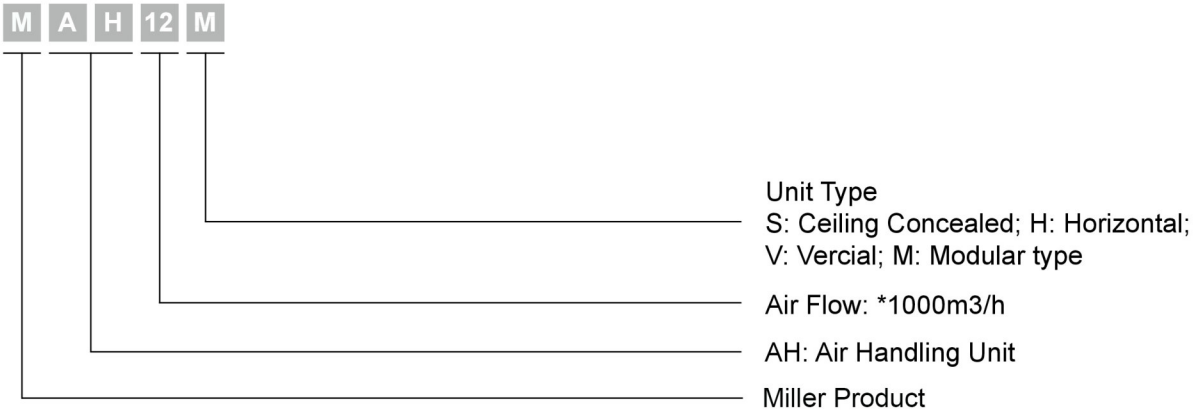
LOW NOISE
Thanks to the rigidly bolted panel, dynamically and statically balanced fan assembly with spring isolator and closely integrated section, maximum to reduce the vibration and noise.

COIL DESIGN
All coils are designed by professional computer selection software, proved through the lab testing and real life application.

MODULAR DESIGN
HYC modular AHU design is adopting modular concept in both the length and width, making it flexible and robust to suit different site conditions. Panels are fastened with bolts and nuts, thus making site installation work easy but with factory standard assembly finishing.

FUNCTION SECTIONS
As modular design, multi function sections could be combined as real site conditions. Avaiable sections include:mixing, fresh air, return air, exhaust air, prefilter, secondary filter, hepa filter, cooling coil, heating coil, electrical heater, humidity, fan, sound attenuation, access door, diffusion, all those sections etc.

NOMENCLATURE

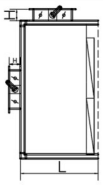
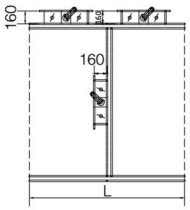
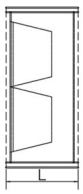
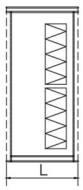
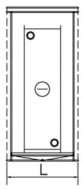
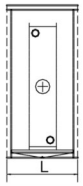
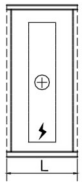


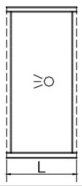
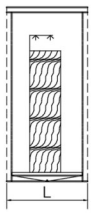
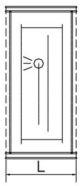
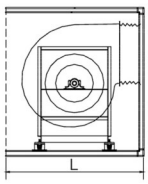
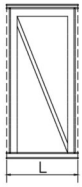
Return air condition

Air flow	4ROW				6ROW				8ROW			
	TC	SC	Water flow	Water resistance	TC	SC	Water flow	Water resistance	TC	SC	Water flow	Water resistance
m³/h	kW	kW	L/S	kPa	kW	kW	L/S	kPa	kW	kW	L/S	kPa
2110	8.50	7.77	0.38	1.0	13.40	10.19	0.62	3.4	16.45	11.52	0.76	6.1
3640	19.43	15.32	0.91	6.0	26.65	18.83	1.26	14.9	31.19	20.85	1.46	24.8
5180	30.29	22.77	1.43	16.1	39.87	27.49	1.88	36.3	45.86	30.19	2.15	59.3
5580	29.31	23.13	1.39	7.3	40.35	28.50	1.92	16.9	47.37	31.62	2.25	27.7
7990	46.08	34.70	2.18	18.9	61.01	42.04	2.87	40.9	63.69	63.51	3.06	9.2
10410	63.40	46.51	3.01	37.8	73.82	52.32	3.53	10.9	87.09	58.20	4.18	18.1
12820	79.63	57.84	3.68	59.7	94.23	65.74	4.47	18.3	110.10	72.83	5.26	30.3
10800	62.40	46.85	2.98	16.0	82.44	56.72	3.95	36.2	94.99	62.37	4.52	58.3
14090	85.30	62.63	4.06	31.4	99.53	70.54	4.77	10.8	117.58	78.54	5.56	17.9
17380	108.73	78.64	5.18	54.1	127.58	88.96	6.08	18.4	149.32	98.66	7.18	30.4
20670	117.51	88.60	5.63	13.3	156.33	107.68	7.51	29.4	180.23	118.43	8.60	46.1
17030	103.88	75.96	4.99	34.8	120.30	85.20	5.76	10.8	142.11	94.87	6.79	17.9
20980	131.12	94.81	6.19	56.7	153.81	107.24	7.33	18.5	179.44	228.69	8.48	29.5
24930	141.99	106.92	6.82	13.4	188.68	129.86	9.09	29.6	217.35	142.77	10.37	46.3
28890	169.72	125.98	8.13	19.9	222.26	151.97	10.51	41.6	234.26	157.83	11.22	14.6
25650	158.78	115.21	7.37	59.7	188.76	131.34	9.08	18.9	220.20	145.40	10.58	30.6
30470	173.25	130.48	8.31	13.4	230.47	158.60	11.10	29.6	266.12	174.64	12.67	46.3
36010	204.73	154.14	9.83	15.0	272.10	187.27	13.07	32.3	314.43	206.31	14.97	50.0
41720	245.31	181.89	11.80	22.4	320.99	219.34	15.25	45.8	338.41	227.84	16.32	21.5
47250	284.63	208.76	13.68	31.1	366.25	249.53	17.00	59.5	391.14	261.35	18.86	29.1
52950	306.38	227.43	14.73	35.6	419.38	283.41	20.17	86.1	445.44	295.90	21.46	38.3
47930	280.50	208.37	13.39	19.6	368.50	251.84	17.60	42.3	387.50	261.17	18.51	21.5
54520	326.50	240.05	15.59	27.6	425.50	289.11	20.33	58.8	450.50	301.17	21.53	29.5
61100	375.50	272.92	17.94	37.8	435.50	306.55	20.81	26.1	513.50	341.19	24.54	39.0
59970	360.50	264.56	17.22	27.5	468.50	318.18	22.39	58.4	496.50	331.66	23.73	24.0
67210	410.50	299.15	19.61	37.0	527.11	357.43	24.40	72.9	565.50	375.55	27.03	31.8
74450	462.50	334.55	22.10	48.6	540.50	377.58	25.83	27.0	634.50	419.47	30.33	40.8
81220	504.50	364.92	24.11	51.0	590.50	412.25	28.22	29.8	692.50	457.71	33.10	44.5
94760	589.50	426.07	28.17	56.5	688.50	480.74	32.91	35.5	805.50	532.91	38.51	52.1
98500	616.50	444.41	29.47	54.6	720.50	501.72	34.44	21.7	842.50	556.19	40.28	34.5
107720	682.50	489.40	32.62	68.9	800.50	556.56	38.27	27.3	932.50	613.06	44.58	43.3
116940	731.99	527.55	33.01	73.8	880.50	606.16	42.09	33.7	1018.50	668.20	48.69	52.8
124060	774.96	558.96	34.58	72.2	933.50	642.79	44.63	28.9	1081.50	709.30	51.71	46.3
133930	821.00	596.85	33.96	73.2	1018.50	698.45	48.69	35.2	1174.50	768.74	56.16	56.0
143810	842.50	624.94	40.28	19.7	1102.50	753.70	52.71	42.1	1269.50	829.09	60.70	67.0
153680	913.50	673.24	43.67	23.6	1190.50	810.64	56.92	50.2	1353.22	884.48	62.18	72.8
160720	920.50	689.78	44.01	18.9	1220.50	837.37	58.36	40.0	1402.99	919.64	65.53	59.5
172570	1010.50	749.66	48.31	23.1	1323.50	904.59	63.28	48.0	1391.50	938.01	66.54	28.3
184420	1095.50	812.75	52.38	27.6	1427.50	972.26	68.26	56.8	1506.50	1010.66	72.04	33.3
196270	1180.50	865.44	56.44	32.5	1530.50	1039.51	73.19	66.5	1621.50	1083.35	77.54	38.8

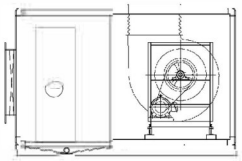
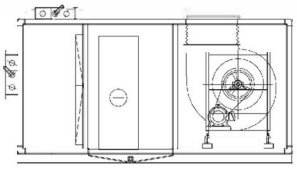
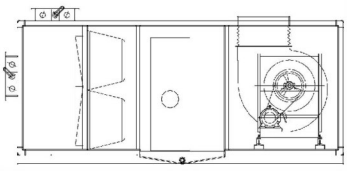
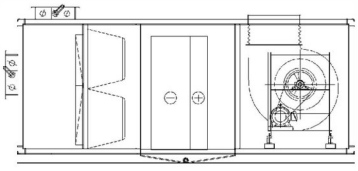
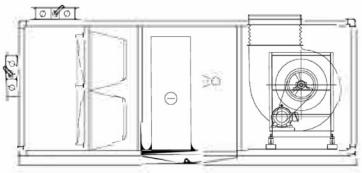
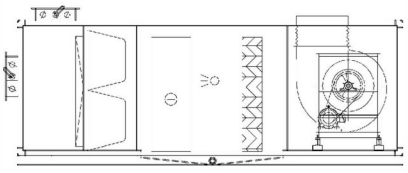
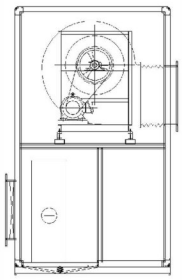
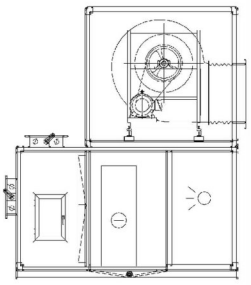
The performance values refer to the following conditions:
- Cooling: Air inlet temperature: DB27 ºC /WB19.5 ºC, water temperature: 7/12 ºC.
- Heating: Air inlet temperature: 15 ºC

Functional Sections Schematic Plot

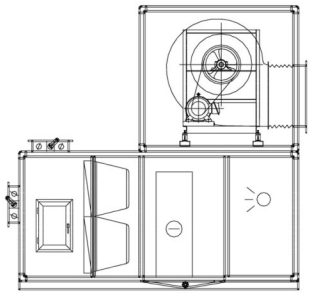
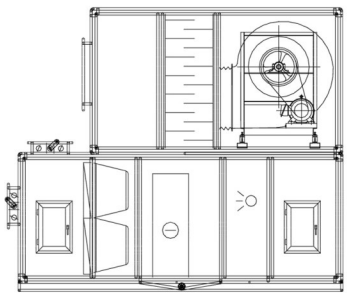
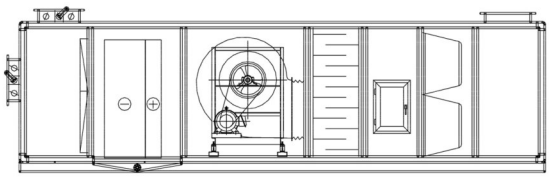
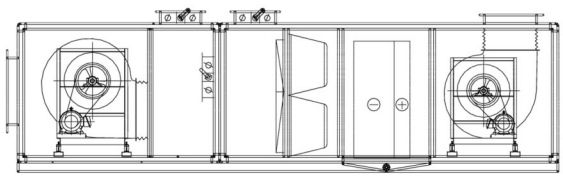
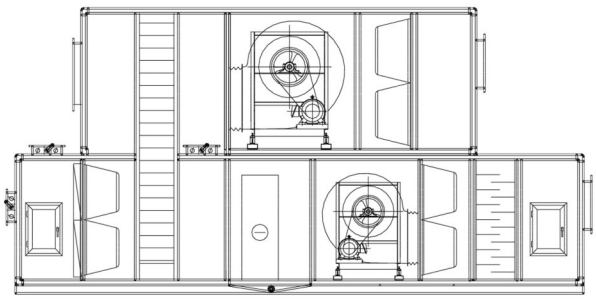
Function part	Schematic	Length(modulus)
Mixing section (with pre-filter)		L 0202-0303 3L 0810-0911 7L 0304-0606 4L 1011-1114 8L 0607-0707 5L 1214-1217 9L 0708-0809 6L 1415-1418 10L Aluminum alloy damper H=125mm Galvanized damper H=160mm
Fresh air/ return air/exhaust air mixing section		L 0202-0303 6L 0304-0606 8L 0607-0809 12L 0810-1011 14L 1111-1418 16L
Bag filter section		L=3L
Hepa filter section		L=4L
Cooling coil section		L= 0202-0507 4L 0508-0810 6L 0909-1418 8L
Hot water/steam coil section		L=2L
Electrical heater section		L=3L

Function part	Schematic	Length(modulus)
Steam humidify section		4L normal common use with cooling coil
Wet film humidify section		2L normal install with cooling coil,no extra space need
High pressure spray humidity section		4L normal common use with cooling coil
Fan section		3 different air outlet direction as condition to chose
Sound attenuation Section		there is 6L/7L/8L models as sound attenuation different
Access door section section		3L could tailor-made as customer inquiry
Diffusion section		3L, 4L, 6L

Functional Sections Schematic Plot

Horizontal 1	Cooling coil section(with filter) +fan section	
Horizontal 2	Mixing section(with pre-filter)+ cooling coil section+ fan section	
Horizontal 3	Mixing section+pre(medium) filter section+cooling coil section+ fan section	
Horizontal 4	Mixing section+pre(medium) filter section+cooling coil section(with heating coil)+ fan section	
Horizontal 5	Mixing section+pre(medium) filter section+cooling coil section(with humidify)+ fan section	
Horizontal 6	Mixing section+pre(medium) filter section+cooling coil section +humidify section(with water baffle)+ fan section	
Mixing 2	Mixing section(pre-filter)+cooling coil humidify section+ fan section	
Mixing 3	Mixing section +pre(medium) filter section+cooling coil section +humidify section +middle section+ fan section+sound attenuation section +supply air section	

Functional Sections Compound Mode

Vertical	Plate pre-filter+cooling coil section+ fan section	
Mixing 1	Mixing section(pre-filter)+ cooling coil humidify section+ fan section	
Horizontal 7	Mixing section(with plate pre-filter)+cooling coil/heating coil section+ fan section+sound attenuation section+middle section+bag filter medium section +supply air section	
Horizontal 8	Return air fan section+fresh air/ **exhaust air mixing section+ pre(medium)filter section** +cooling coil/heating coil section+supply air fan section	
Mixing 4	Supply air system(upper):Return air section+medium filter section +fan section+middle section+heat recovery section+supply air section Supply air system(bottom):Inlet air section+pre(medium) filter section +heat recovery section+second time return air section+cooling coil section+fan sectio+hepa(medium) filter section+sound attenuation section+supply air section	

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