

# 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

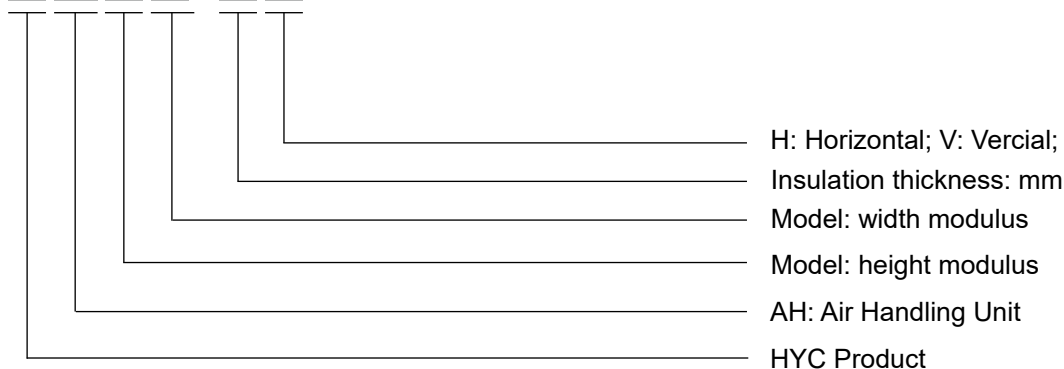
HYC modular AHU design is adopting modular concept in both the length and width, making it flexible and robust to suit different site conditions. Panels are fastened with bolts and nuts, thus making site installation work easy but with factory standard assembly finishing.

### FUNCTION SECTIONS

As modular design, multi function sections could be combined as real site conditions. Available 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

**H AH 18 30 - 25 H**



## SPECIFICATION

### Cooling performance parameter

Unit type		Rated air flow m <sup>3</sup> /h	Fresh air condition			Return air condition		
Height modulus	Width modulus		4 row capacity(kW)	6 row capacity(kW)	8 row capacity(kW)	4 row capacity(kW)	6 row capacity(kW)	8 row capacity(kW)
06	07	2045	21.4	26.4	32.2	8.9	11.4	14.9
06	08	2445	26.1	33.1	39.0	11.1	14.5	18.5
06	09	2845	31.5	39.4	46.5	12.7	16.2	22.7
06	10	3185	35.7	44.8	50.2	14.5	20.6	23.6
07	10	4095	45.6	58.4	64.2	19.3	24.6	30.6
07	11	4610	48.7	66.5	74.3	21.9	29.6	38.9
08	10	4545	49.8	64.8	71.6	20.8	29.8	34.2
08	11	5115	54.6	71.6	79.8	23.9	31.2	40.8
08	12	5630	61.5	76.9	90.8	27.3	36.8	46.4
08	13	6060	68.5	82.7	99.7	29.2	40.0	49.5
08	14	6775	73.3	96.4	107.5	33.1	45.0	51.8
10	12	7325	78.0	99.3	111.5	35.5	44.7	57.8
10	13	7885	87.1	111.5	121.6	38.3	51.8	62.4
10	15	9370	100.7	133.8	147.7	43.5	58.7	72.7
10	16	10115	111.8	141.1	163.1	46.4	63.1	81.4
11	15	10810	116.1	157.1	175.8	49.1	74.2	87.8
11	16	11665	128.4	156.1	187.3	53.5	77.3	97.5
11	17	12525	133.7	169.7	197.3	57.7	84.7	98.1
12	17	13355	149.7	189.9	212.7	63.3	86.8	107.4
12	18	14265	153.4	197.7	233.5	68.3	97.7	107.7
13	17	15020	163.3	212.4	239.7	69.4	100.1	116.4
13	18	16050	181.9	224.8	265.2	75.4	100.9	136.0
13	19	16820	189.7	234.4	274.2	82.3	108.1	127.3
14	19	18690	204.7	264.9	298.8	89.9	116.9	156.6
14	20	19835	220.2	274.5	315.2	95.4	133.7	158.6
15	19	19630	219.5	274.4	301.7	94.7	123.2	162.3
15	21	21675	220.2	302.8	342.0	102.5	135.1	166.2
16	21	23735	243.5	333.1	387.8	116.3	153.0	196.8
16	22	25050	252.3	367.8	402.8	121.7	171.6	210.4
16	24	27680	293.6	392.7	438.9	130.5	179.4	213.0
19	22	28325	297.3	415.1	471.6	141.0	186.5	215.5
19	23	30260	319.2	446.8	480.8	146.8	189.9	245.3
19	25	33230	357.2	497.2	546.6	163.4	212.7	266.1
20	25	35765	383.1	537.0	572.1	176.6	239.6	304.1
20	26	37365	404.8	560.1	631.8	184.7	234.3	305.9
21	26	40055	436.6	602.8	640.8	198.9	253.4	319.4
22	27	41770	456.6	630.6	700.9	206.8	274.1	334.6
23	26	42705	463.9	641.1	665.7	209.6	274.9	350.4
22	30	46405	523.4	732.9	757.4	236.3	294.4	350.0
25	28	51540	581.6	803.1	811.8	273.2	327.3	388.7
25	31	57710	651.0	891.0	936.3	300.8	354.2	482.9
25	34	60900	679.7	874.7	987.0	311.6	366.1	448.6
28	34	67670	741.8	975.6	1000.8	335.1	419.9	549.3
28	38	75670	845.8	1082.2	1241.3	379.2	463.1	558.0
29	40	84285	068.9	1220.4	1354.3	431.9	532.4	659.9
31	41	94940	1096.1	1410.9	1471.0	486.1	562.5	764.0
32	45	103880	1089.1	1557.8	1650.8	537.3	671.3	800.8

The performance values refer to the following conditions:

- Fresh air condition: Air inlet temperature: DB35 °C /WB28 °C, water in/out temperature: 7/12 °C.
- Return air condition: Air inlet temperature: DB27 °C /WB19.5 °C, water in/out temperature: 7/12 °C.
- HYC reserve the right to make changes for above parameters without prior notice.

## SPECIFICATION

### Heating performance parameter

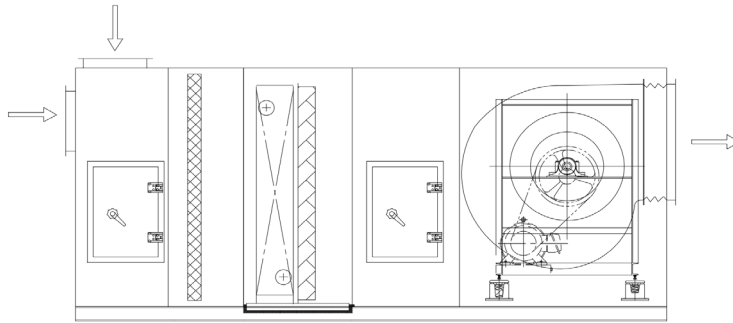
Unit type		Rated air flow m <sup>3</sup> /h	Fresh air condition				Return air condition			
Height modulus	Width modulus		1 row capacity(kW)	2 row capacity(kW)	3 row capacity(kW)	4 row capacity(kW)	1 row capacity(kW)	2 row capacity(kW)	3 row capacity(kW)	4 row capacity(kW)
06	07	2045	9.6	16.1	22.5	24.0	6.9	14.0	18.2	19.3
06	08	2445	11.8	20.6	27.2	27.3	8.8	16.8	21.3	23.2
06	09	2845	14.7	23.1	30.3	33.4	10.5	19.8	26.7	28.2
06	10	3185	16.0	27.4	34.2	38.2	11.5	22.1	28.2	31.1
07	10	4095	23.3	33.8	43.8	47.0	14.9	29.3	37.6	40.3
07	11	4610	26.5	38.9	49.7	54.1	16.9	31.7	41.7	46.5
08	10	4545	25.7	37.4	48.6	52.4	17.1	30.8	41.2	45.3
08	11	5115	27.4	42.4	57.4	60.2	18.7	36.8	47.9	49.6
08	12	5630	30.2	47.8	60.9	67.0	21.3	40.5	51.3	57.2
08	13	6060	34.1	51.5	66.2	72.2	23.2	44.2	56.3	57.8
08	14	6775	35.3	58.6	75.1	77.7	25.3	48.9	61.5	66.1
10	12	7325	44.2	59.9	77.0	84.1	28.0	50.5	69.3	70.3
10	13	7885	40.1	65.3	84.5	90.9	29.8	55.0	75.2	75.6
10	15	9370	57.1	77.4	101.2	109.1	35.4	67.8	87.4	92.7
10	16	10115	56.1	83.8	109.2	114.3	38.4	71.1	89.9	98.1
11	15	10810	57.3	93.2	114.7	125.8	42.9	75.4	96.7	106.5
11	16	11665	72.7	101.7	127.3	140.2	46.1	84.8	104.7	116.2
11	17	12525	72.5	108.0	133.5	150.0	48.6	88.1	116.8	124.5
12	17	13355	83.6	114.3	144.0	154.4	52.2	91.4	121.2	129.5
12	18	14265	85.6	122	152.3	162.7	57.5	100.8	130.2	138.2
13	17	15020	88.7	123.8	169.9	173.8	57.2	103.1	141.1	145.6
13	18	16050	100.2	135.7	178.0	190.4	63.6	114.6	150.6	155.8
13	19	16820	92.4	137.0	190.5	200.7	64.4	119.0	153.1	166.5
14	19	18690	111.6	158.5	199.9	219.8	75.9	136.2	169.7	181.4
14	20	19835	121.9	168.9	212.5	238.8	76.6	137.3	183.4	198.4
15	19	19630	114.7	161.5	222.8	223.6	78.1	138.9	175.9	189.0
15	21	21675	135.9	181.4	239.9	241.3	86.7	152.8	196.8	218.7
16	21	23735	151.0	196.1	254.7	276.4	92.2	171.8	214.5	229.7
16	22	25050	134.7	204.7	276.7	283.5	100.5	181.5	224.4	251.3
16	24	27680	170.4	241.6	312.3	316.4	112.1	195.6	256.6	275.6
19	22	28325	160.4	235.2	307.7	314.0	108.9	194.2	261.7	278.6
19	23	30260	168.0	248.7	323.2	238.3	119.1	213.1	277.9	294.8
19	25	33230	167.9	285.5	356.5	387.2	136.2	235.1	313.0	310.1
20	25	35765	218.8	306.2	393.4	416.8	139.5	258.4	338.1	354.3
20	26	37365	220.9	296.1	397.7	432.6	143.8	267.7	345.8	364.0
21	26	40055	214.3	312.8	432.0	449.3	154.8	271.9	369.8	396.5
22	27	41770	244.5	348.9	454.0	490.2	167.9	288.2	377.2	407.7
23	26	42705	259.4	346.4	468.8	480.3	173.0	290.5	373.8	417.9
22	30	46405	282.9	374.0	510.1	549.4	184.3	333.1	434.5	442.5
25	28	51540	286.9	413.0	543.5	580.3	191.4	368.9	465.7	484.1
25	31	57710	314.7	478.9	639.5	650.9	215.2	408.1	530.3	543.9
25	34	60900	359.3	486.3	654.2	683.7	235.6	424.6	545.1	574.2
28	34	67670	408.8	538.6	716.3	703	253.9	453.9	588.8	667.9
28	38	75670	408.1	621.5	833.4	843.0	278.9	531.1	672.9	711.6
29	40	84285	480.3	672.2	915.8	940.6	317.5	594.1	732.0	796.9
31	41	94940	544.9	748.7	1017.9	1068.3	361.0	675.9	877.2	911.9
32	45	103880	540.8	853.6	1127.4	1153.2	393.1	720.1	953.8	991.3

The performance values refer to the following conditions:

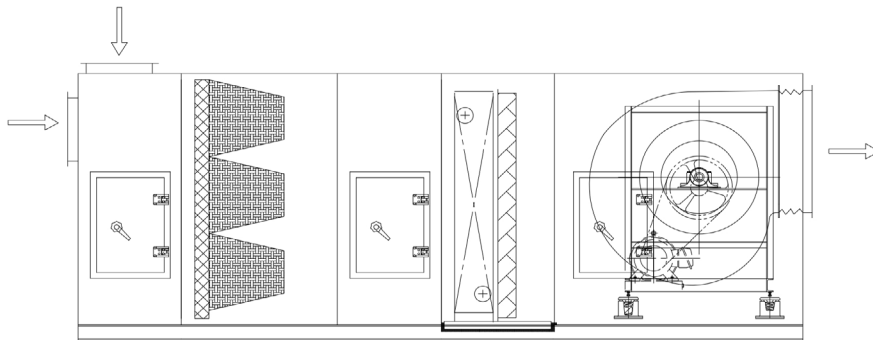
- Fresh air condition: Air inlet temperature: DB7 °C, hot water in/out temperature: 60/50 °C.
- Return air condition: Air inlet temperature: DB15 °C, hot water in/out temperature: 60/50 °C.
- HYC reserve the right to make changes for above parameters without prior notice.

COMBINATION METHOD

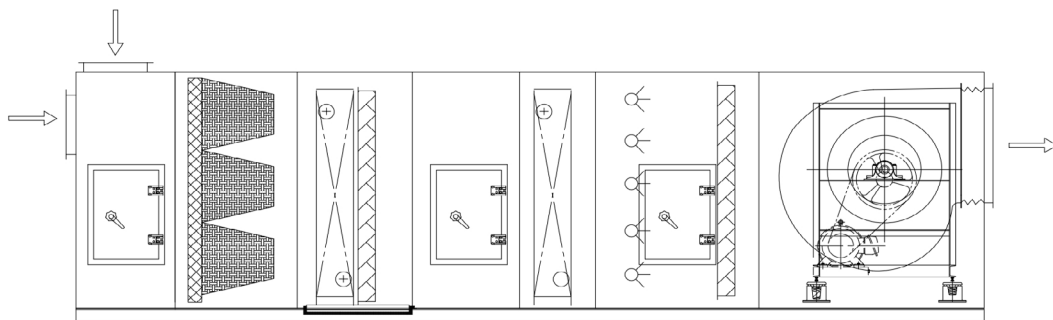
**Function segment combination reference**



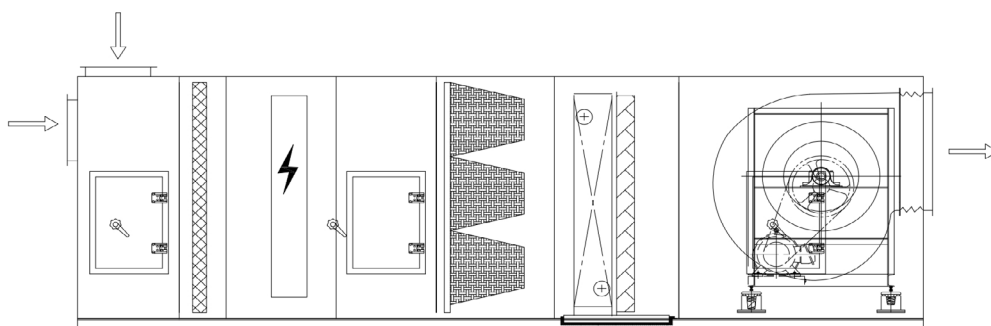
Mixing segment+pre-filter segment+cooling coil segment(with water baffle)+fan segment



Mixing segment+pre&medium filter segment+service segment+cooling coil segment(with water baffle)+fan segment



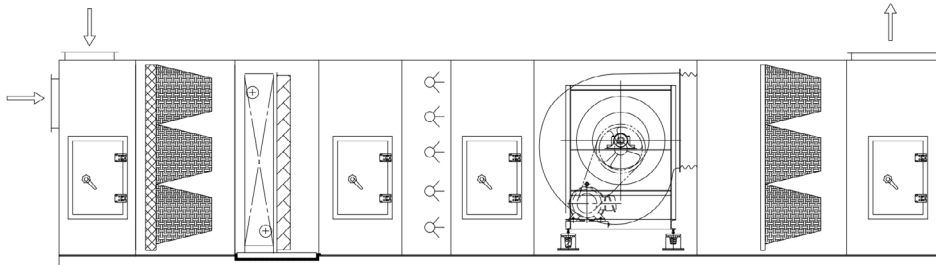
Mixing segment+pre&medium filter segment+cooling coil segment(with water baffle)  
+service segment+hot water segment+high pressure spray humidifier segment+fan segment



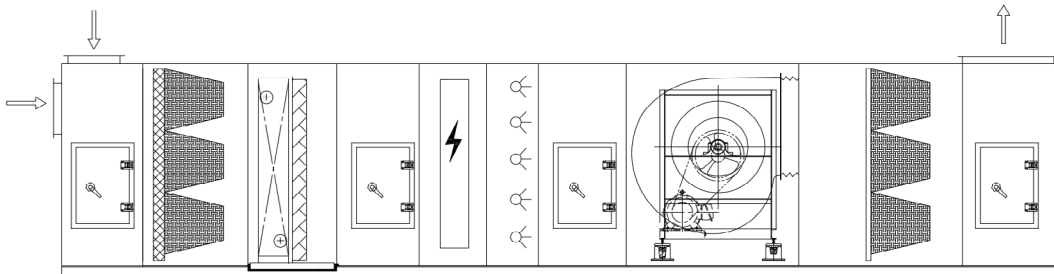
Mixing segment+pre-filter segment+electrical heater segment  
+service segment+bag filter segment+cooling coil segment(with water baffle)+fan segment

COMBINATION METHOD

**Function segment combination reference**

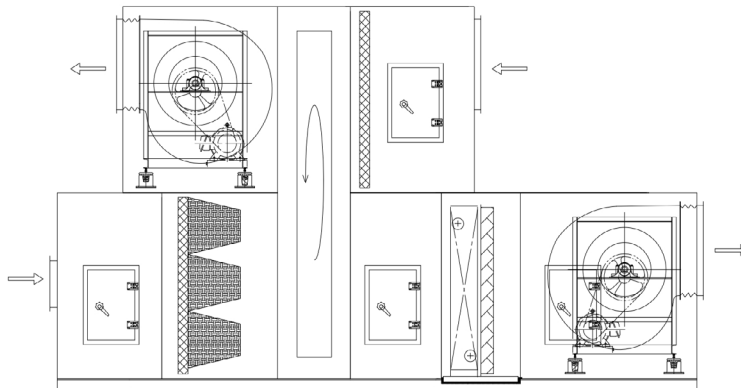


Mixing segment+pre&medium filter segment+cooling coil segment(with water baffle)+service segment+dry steam humidifier segment+service segment+fan segment+flow equalizing segment+bag filter segment+air outlet segment



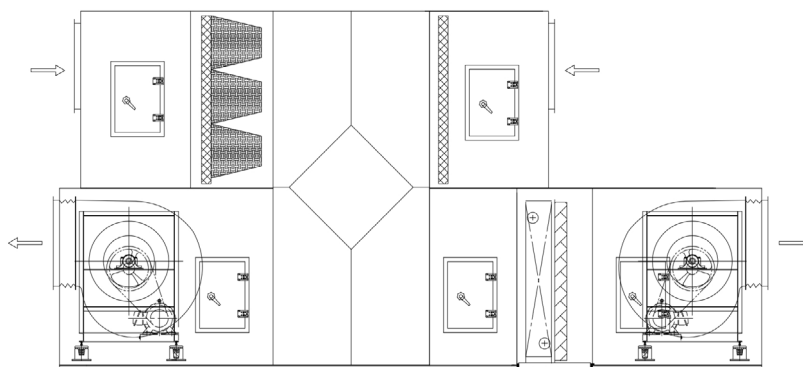
Mixing segment+pre&medium filter segment+cooling coil segment(with water baffle)+service segment+electrical heater segment+dry steam humidifier segment+service segment+fan segment+flow equalizing segment+bag filter segment+air outlet segment

Fresh air segment+rotary heat recovery segment+pre-filter segment+return air segment



Air inlet segment+pre&medium filter segment+rotary heat recovery segment+service segment+cooling coil segment(with water baffle)+air outlet segment

Fresh air segment+pre&medium filter segment+plate heat recovery segment+pre-filter segment+return air segment



Exhaust air segment+plate heat recovery segment+service segment+cooling coil segment(with water baffle)+supply air fan segment