

TAD TMD TBD

 **TICA**<sup>®</sup>  
www.ticachina.com



# STANDARD AIR HANDLING UNIT

**TICA CENTRAL AIR-CONDITIONING**

CA-TAD/TMD/TBD-201610V01



TICA is a hi-tech enterprise specialized in R&D, manufacturing, sales and services of air-conditioning and refrigeration products. Established in 1991, it has developed into one of the top four Chinese air-conditioning brands, with factories in Nanjing, Tianjin and Guangzhou, and a network of over 70 sales and service filiales around the world.

TICA has invested up to RMB 600 million in the first phase to build the top notch central air-conditioning R&D and production base, credited as the state enterprise R&D center. Certified by CNAS, it serves as a national R&D public service platform.

TICA produces over 30 series of products, covering AHUs, VRFs, screw chillers and centrifugal chillers, diverse enough to meet various requirements with regards to comfort and manufacturing processing application.

TICA is a strong competitor in chillers and commercial air conditioning products. It is the largest producer of AHUs in China for five consecutive years and covers over 40% of the market share as the supplier to such industries as micro-electronics, surgery operation room equipment and biopharmaceuticals.

TICA has established a global strategic joint venture with United Technologies Corporation (UTC) whose businesses include the world's most advanced Pratt & Whitney Aircraft Engines, the largest air-conditioning company Carrier and the biggest elevator company Otis.

The giant UTC transfers such global cutting-edge core technologies as large centrifugal chillers, screw chillers, and ORC systems to TICA, thrusting TICA 20 years ahead of its Chinese counterparts in terms of centrifuge technology and 30 years ahead in cryogenic power generation technology. Meanwhile, TICA and UTC will integrate global resources to create a brand-new international market pattern.

Meanwhile, the company has also provided energy-saving air-conditioning system integration solutions to both domestic and foreign users like Zhongnanhai, the Great Hall of the People, Beijing Bird's Nest stadium, the Water Cube, the Wukesong Indoor Stadium, Petro China, Sinopec, State Grid, Nanjing Panda, Hangzhou Xiaoshan Airport, Hainan Airlines Group, Shangri-La Hotel, Manila Ocean Park, Abu Dhabi Al Muneera, SM City in Philippines and Unilever, etc.



Nanjing Headquarter



Tianjin Base



Guangzhou Base

## DIRECTORY

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**Features**

**Patented structure, excellent thermal insulation property**

TICA patented design of labyrinth seal structure formed by using aluminum sections with concave and convex chamfer at joints of AHU body and tightening with bolts and nuts. The panel is made of high-quality paint-coated panel and galvanized steel sheet which provide good fire and corrosion resistance. The inner panel can also be made of stainless steel to meet the requirements of different customers.

**Robust structural design**

TICA labyrinth AHU has an aluminum alloy frame and a hidden metal inner frame, in which the former constitutes a rigid body with high resistance to torsion by using a tenon structure and tightening with bolts and nuts, while the latter greatly improves the strength of the unit.

**Prevention of cold bridge and rust**

All metals inside TICA labyrinth AHU are isolated from those outside by means of polyurethane foaming and specially designed seals, eliminating insulation strips commonly used in general AHUs and therefore preventing the cold bridge. Frames of aluminum sections are embedded around all panels, completely isolating corners of metal panel from air and moisture and thereby preventing rust spot on panels.

**Professional selection software**

The cooling coils and heating coils are selected by professional selection software which is programmed in strict accordance with laws of engineering and modified according to actual service of coils to provide more reliable software.

**World-class designed cooling and heating coils**

Coils feature high-quality copper tubes combined with unique corrugated fin; the heat exchanger with excellent heat transfer is produced by means of advanced mechanical expanding.

**Corrugated control damper for flexible adjustment**

Manual or automatic mode is available. The split corrugated linked control damper opens flexibly, with low air resistance and excellent sealing performance, which can be operated manually or by an additional electric controller.

**Optimized design fan and motor, with low noise and high efficiency**

The fan impeller and pulley are corrected through static and dynamic balance, and the fan is corrected through the running vibration test for stable operation. On the base that shared by the fan and its motor, there is a shock absorber. And a flexible connector is located between the fan outlet and the AHU body, which is isolated from moving parts for shock isolation.



**Mechanical-electrical control**



**Mechanical-electrical thermostat**

**Thermostat**

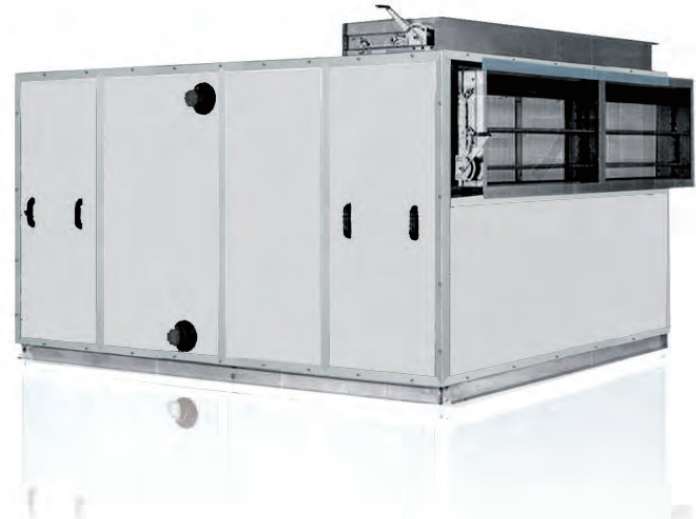
Grand appearance and large LCD, giving an impression of high-class, one-key start, automatic operation;  
 Light touch on buttons provides a display of several states;  
 Highly reliable single-chip microcomputer with strong resistance to interference  
 Small size, wall mounting, simple and convenient



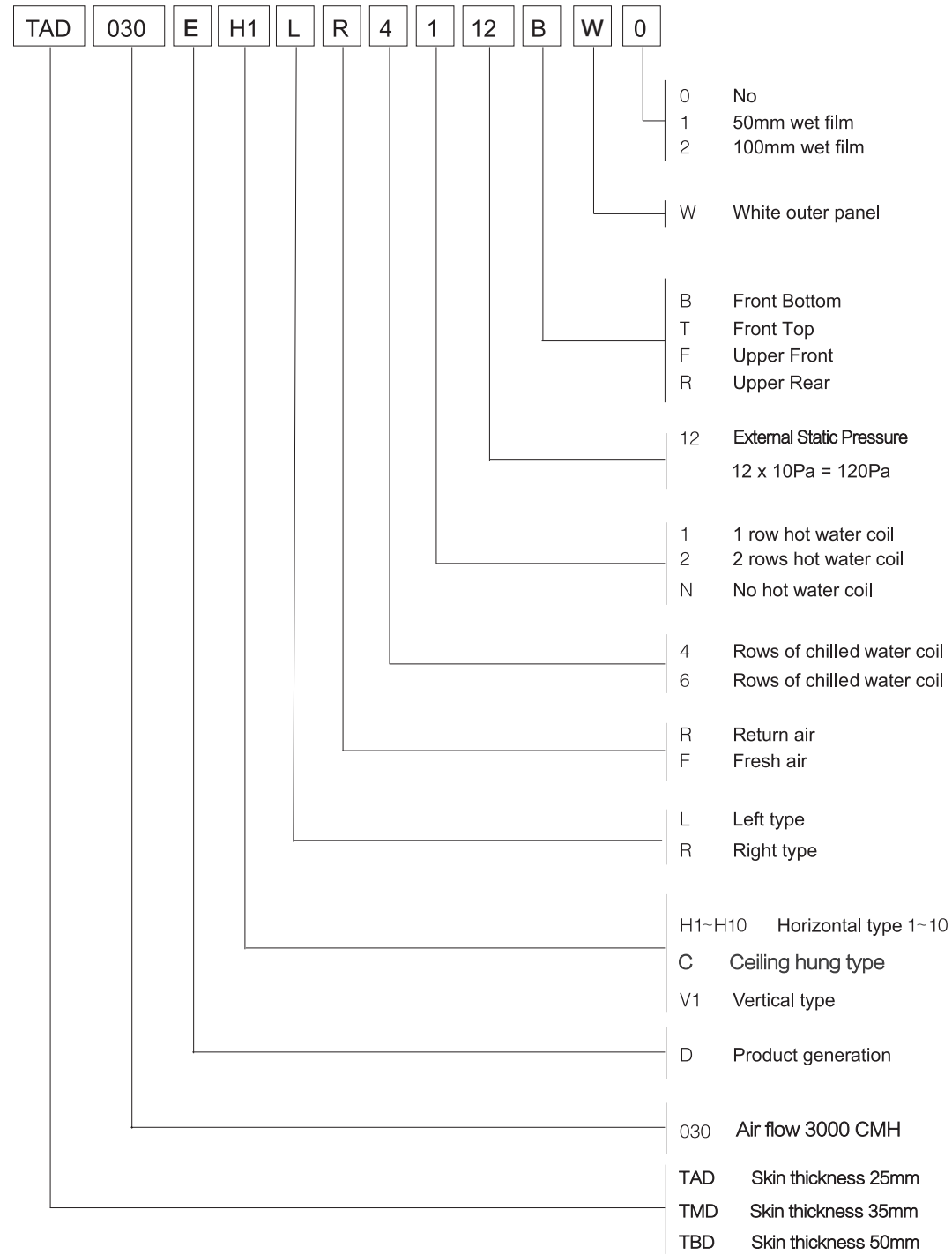
**Mechanical-electrical control cabinet**

**Cabinet**

Professional design, integrated control, reasonable wiring, complete protection;  
 Standardized design, development, procurement, prompt delivery, fast installation;  
 Main elements of famous international brands (Schneider/LG/TICA) for reliable and guaranteed quality;  
 Various external interlocks, reserved FRD and fresh air valve (on and off at the same time as forced draft fan), water valve control signal;  
 For motor power ≤ 7.5 kW, control cabinet is installed together with the unit, eliminating secondary purchase and installation, with simple field connection and fast installation, saving labor and space.

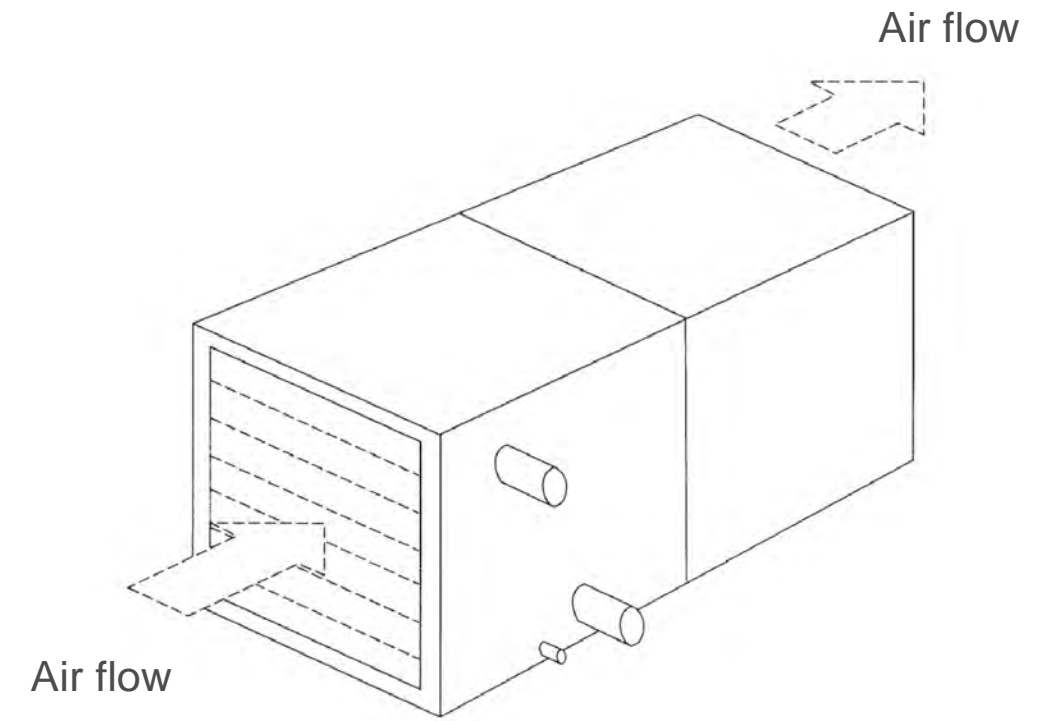


### Nomenclature



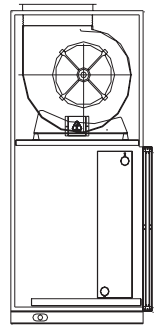
### Method To Determine The Side Of Unit

The unit is left type

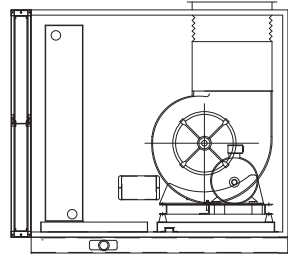


Facing the air flow, if water piping at left side indicates left type. Otherwise, right type.

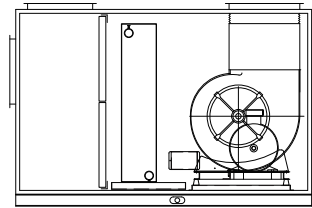
**Unit Type Configuration (TAD/TMD/TBD)**



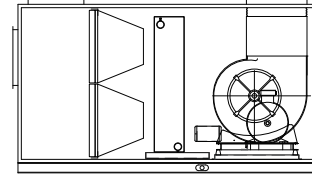
**Vertical Type , V1**  
Pre-filter+Cooling coil +Fan section



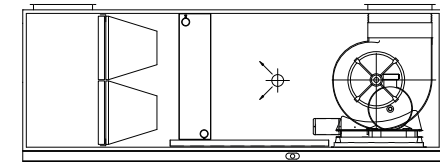
**Horizontal Type 1 , H1**  
Pre-filter+Cooling coil+Fan section



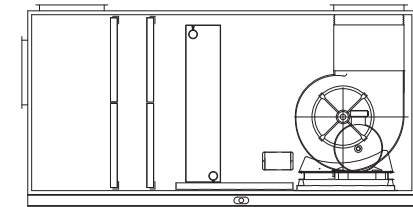
**Horizontal Type 2 , H2**  
Mixing box+Pre-filter+Cooling coil+Fan section



**Horizontal Type 3 , H3**  
Mixing box+Pre-filter+Secondary bag filter+Cooling coil+Fan section

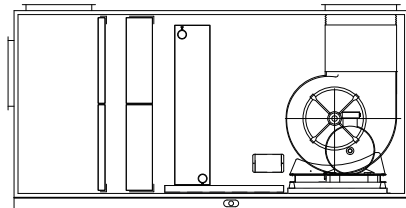


**Horizontal Type 4 , H4**  
Mixing box+Pre-filter+Secondary bag filter+Cooling coil+High-pressure spray humidifier+Fan section

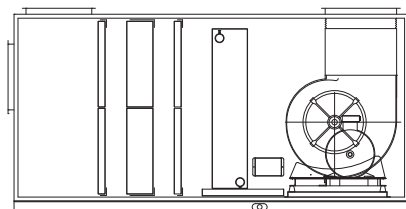


**Horizontal Type 5 , H5**  
Mixing box+Pre-filter+Activated carbon filter+Cooling coil+Fan section

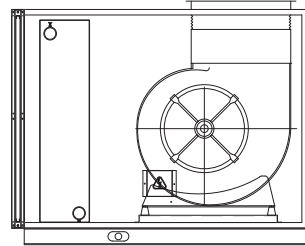
**Horizontal Type 6 , H6**  
Mixing box+Pre-filter+Electrostatic dust collection+Cooling coil+Fan section



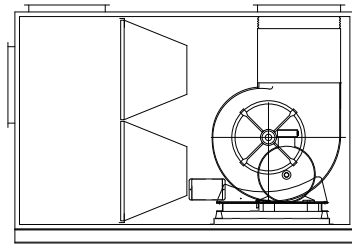
**Horizontal Type 7 , H7**  
Mixing box+Pre-filter+Electrostatic dust collection+Activated carbon filter+Cooling coil+Fan section



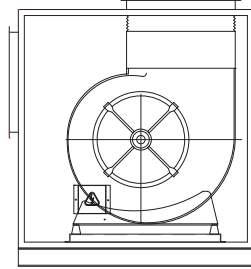
**Horizontal Type 8 , H8**  
Pre-filter+Heating coil+Fan section



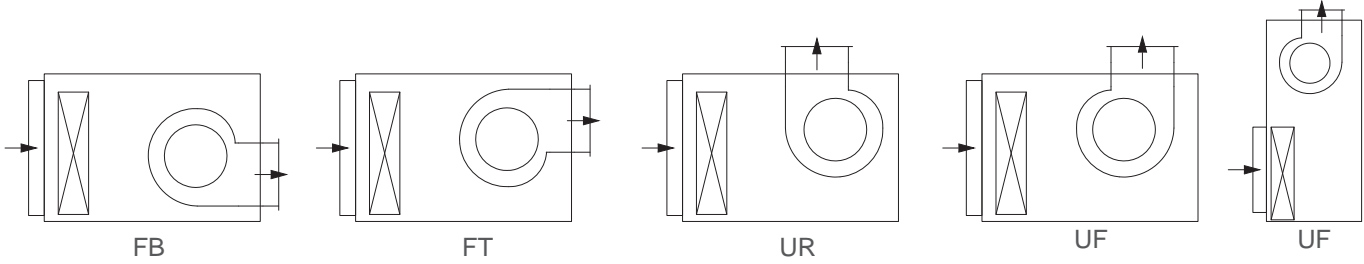
**Horizontal Type 9 , H9**  
Mixing box+Pre-filter+Secondary bag filter+Fan section



**Horizontal Type 10 , H10**  
Air inlet section+Fan section



**Fan outlet direction**



## General Data

### Return Air Condition

Model	Air Volume	4rows						6rows					
		Rated Cooling Capacity	Rated Heating Capacity	Water Flow	Water Pressure Drop	Chilled Water Pipe	Condensing Water Pipe	Rated Cooling Capacity	Rated Heating Capacity	Water Flow	Water Pressure Drop	Chilled Water Pipe	Condensing Water Pipe
TAD	m <sup>3</sup> /h	kW	kW	l/s	kPa	DN	DN	kW	kW	l/s	kPa	DN	DN
020E	2000	11.0	22.8	0.5	17.4	32	25	14.8	27.6	0.7	44.8	32	25
030E	3000	17.2	35.1	0.8	28.7	32	25	22.7	41.9	1.1	71.6	32	25
040E	4000	23.4	47.1	1.1	45.3	32	25	29.6	54.6	1.4	34.8	32	25
050E	5000	28.2	57.0	1.3	38.9	32	25	34.5	64.5	1.6	30.3	32	25
060E	6000	35.1	69.1	1.7	59.5	40	25	42.4	78.2	2.0	40.3	40	25
070E	7000	41.0	80.7	2.0	72.1	50	25	48.8	92.5	2.3	50.0	50	25
080E	8000	48.2	93.7	2.3	38.5	50	25	57.2	106.7	2.7	74.7	50	25
090E	9000	52.3	102.6	2.5	35.8	50	25	65.1	120.6	3.1	75.7	50	25
105E	10500	59.7	115.7	2.8	50.6	50	25	74.2	138.1	3.5	48.8	50	25
120E	12000	69.8	136.8	3.3	73.4	50	25	89.9	165.3	4.3	75.6	50	25
135E	13500	79.1	158.1	3.8	48.2	65	32	104.1	187.7	5.0	39.0	65	32
150E	15000	90.4	172.7	4.3	49.1	65	32	115.0	207.6	5.5	38.1	65	32
180E	18000	107.0	210.8	5.1	66.4	65	32	136.4	247.2	6.5	51.2	65	32
210E	21000	126.6	247.3	6.0	36.3	65	32	157.4	289.4	7.5	26.4	65	32
240E	24000	148.8	285.6	7.1	53.4	65	32	181.9	332.2	8.7	37.7	65	32
270E	27000	167.5	321.3	8.0	55.1	65	32	204.7	372.0	9.8	39.0	65	32
300E	30000	186.1	357.0	8.9	56.8	65	32	226.1	413.4	10.8	39.8	65	32
330E	33000	204.7	392.7	9.8	72.3	80	32	253.0	456.8	12.1	52.2	80	32
350E	35000	220.1	416.5	10.5	85.6	80	32	271.3	486.9	12.9	61.6	80	32
400E	40000	230.8	451.0	11.0	69.2	80	32	299.8	546.1	14.3	52.5	80	32
450E	45000	248.1	484.8	11.8	71.5	80	32	341.1	617.2	16.3	59.8	80	32
500E	50000	275.6	538.5	13.1	79.1	80	32	379.0	685.9	18.1	65.9	80	32

★ Note

- Cooling capacity is based on the following:
  - Water temperature : 7°C (inlet)/12°C (outlet)
  - Air entering condition : 27°C DB/19.5°C WB
- Heating capacity is based on the following (with same water flow rate as cooling cycle):
  - Water temperature : 60°C (inlet)
  - Air entering condition : 15°C DB
- The manufacturer reserves the rights to make changes to the above specifications without prior notice.

### Fresh Air Condition

Model	Air Volume	4rows						6rows					
		Rated Cooling Capacity	Rated Heating Capacity	Water Flow	Water Pressure Drop	Chilled Water Pipe	Condensing Water Pipe	Rated Cooling Capacity	Rated Heating Capacity	Water Flow	Water Pressure Drop	Chilled Water Pipe	Condensing Water Pipe
TAD	m <sup>3</sup> /h	kW	kW	l/s	kPa	DN	DN	kW	kW	l/s	kPa	DN	DN
020E	2000	27.4	30.7	1.3	31.8	40	25	33.7	34.2	1.6	66.5	40	25
030E	3000	40.5	44.3	1.9	44.0	40	25	47.9	48.9	2.3	89.6	40	25
040E	4000	54.7	58.8	2.6	62.5	50	25	63.8	67.0	3.0	55.8	50	25
050E	5000	68.4	73.8	3.3	64.3	50	25	79.8	83.9	3.8	53.5	50	25
060E	6000	81.0	85.0	3.9	78.3	50	25	97.9	100.5	4.7	74.9	50	25
070E	7000	89.6	95.0	4.3	40.5	65	25	115.4	116.7	5.5	31.4	65	25
080E	8000	101.7	108.6	4.9	57.7	65	25	127.7	134.5	6.1	42.8	65	25
090E	9000	116.8	123.5	5.6	58.5	65	25	140.5	146.7	6.7	40.7	65	25
105E	10500	132.8	154.9	7.0	78.6	65	25	162.1	167.3	7.7	60.0	65	25
120E	12000	157.9	175.3	7.5	82.7	65	25	193.6	196.5	9.2	89.0	65	25
135E	13500	172.8	195.2	8.2	27.2	80	32	222.6	223.1	10.6	61.5	80	32
150E	15000	194.7	221.3	9.3	27.8	80	32	252.6	252.3	12.0	62.8	80	32
180E	18000	230.5	257.6	11.0	37.5	80	32	293.6	296.1	13.1	74.4	80	32
210E	21000	276.3	303.6	13.2	28.1	80	32	331.5	336.1	13.9	78.3	80	32
240E	24000	319.9	348.8	15.2	39.6	80	32	*366.2	*380.6	*12.5	*70.7	80	32
270E	27000	359.9	389.7	17.1	42.6	80	32	*409.6	*428.2	*13.9	*72.4	80	32
300E	30000	384.1	420.5	18.3	43.2	80	32	*455.2	*473.6	*15.5	*75.0	80	32
330E	33000	445.7	482.0	21.2	59.8	80	32	*503.6	*523.3	*17.1	*96.3	80	32
350E	35000	454.3	490.5	21.6	63.7	80	32	*552.5	*578.3	*15.5	*83.6	80	32
400E	40000	477.1	525.2	22.7	40.3	80	32	*589.3	*622.5	*18.7	*83.5	80	32
450E	45000	536.7	594.2	25.6	45.3	80	32	*647.2	*679.6	*19.3	*79.8	80	32
500E	50000	605.1	663.9	28.8	51.6	80	32	*727.9	*774.6	*21.7	*89.9	80	32

★ Note

- Cooling capacity is based on the following:
  - Water temperature : 7° C (inlet)/12° C (outlet)
  - Air entering condition : 35° C DB/28° C WB
- Heating capacity is based on the following (with same water flow rate as cooling cycle):
  - Water temperature : 60° C (inlet)
  - Air entering condition : 7° C DB
- The manufacturer reserves the rights to make changes to the above specifications without prior notice.
- In order to control water pressure drop, the temperature difference of entering and leaving water exceeds 5° C.

### Return Air Condition (With Separate Heating Coil)

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

★ Note

1. Heating capacity is based on the following:  
 a) Water temperature : 60° C (inlet)/50° C (outlet)      b) Air entering condition : 15° C DB
2. Pressure drop of heating coil is 25Pa per row, when add heating coil, please increase pressure drop.
3. The manufacturer reserves the rights to make changes to the above specifications without prior notice.

### Fresh Air Condition (With Separate Heating Coil)

Model	Air Volume	1rows				2rows			
		Rated Heating Capacity	Water Flow	Water Pressure Drop	Hot Water Pipe	Rated Heating Capacity	Water Flow	Water Pressure Drop	Hot Water Pipe
TAD	m <sup>3</sup> /h	kW	l/s	kPa	DN	kW	l/s	kPa	DN
020E	2000	9.0	0.2	0.3	32	16.6	0.4	1.7	32
030E	3000	13.5	0.3	0.5	32	25.7	0.6	3.1	32
040E	4000	18.6	0.5	0.8	32	33.2	0.8	4.2	32
050E	5000	23.2	0.6	0.8	32	43.6	1.1	4.6	32
060E	6000	28.7	0.7	1.0	32	50.6	1.2	5.5	32
070E	7000	33.9	0.8	1.3	32	63.0	1.5	7.2	32
080E	8000	39.9	1.0	1.9	32	73.1	1.8	10.5	32
090E	9000	45.5	1.1	1.8	32	78.4	1.9	9.1	32
105E	10500	51.6	1.3	2.5	32	92.9	2.3	14.0	32
120E	12000	59.0	1.4	3.5	32	106.2	2.6	19.2	32
135E	13500	69.2	1.7	5.3	40	123.3	3.0	28.4	40
150E	15000	75.9	1.9	5.5	40	134.9	3.3	29.5	40
180E	18000	92.3	2.3	7.6	40	161.9	3.9	39.7	40
210E	21000	109.2	2.7	10.0	40	182.9	4.5	7.4	40
240E	24000	124.8	3.0	14.1	40	212.4	5.2	10.7	40
270E	27000	140.4	3.4	14.3	40	237.1	5.8	10.7	40
300E	30000	156.0	3.8	14.4	40	261.3	6.4	10.7	40
330E	33000	173.9	4.2	19.0	40	292.1	7.1	14.1	40
350E	35000	184.4	4.5	22.1	40	309.8	7.6	16.4	40
400E	40000	202.3	4.9	19.2	40	342.8	8.4	14.5	40
450E	45000	227.6	5.6	21.2	40	385.7	9.4	16.0	40
500E	50000	256.1	6.2	23.6	40	423.6	10.3	17.1	40

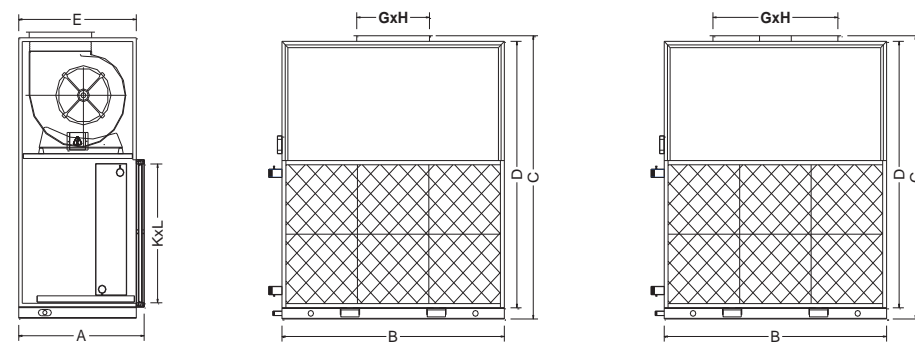
★ Note

1. Heating capacity is based on the following:  
 a) Water temperature : 60° C (inlet)/50° C (outlet)      b) Air entering condition : 7° C DB
2. Pressure drop of heating coil is 25Pa per row, when add heating coil, please increase pressure drop.
3. The manufacturer reserves the rights to make changes to the above specifications without prior notice.

## Dimension And Weight

### Vertical Type

Pre-filter+Cooling coil +Fan section



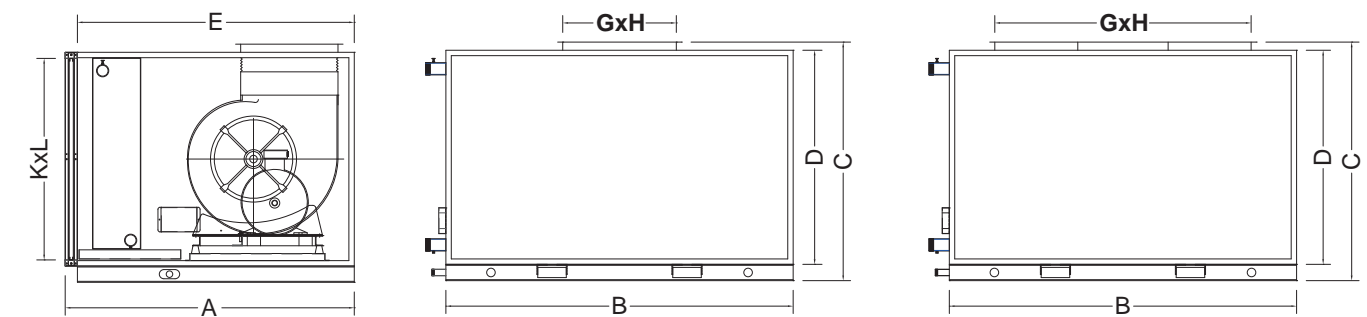
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	640	900	1120	1000	580	232	262	840	390	137	143
030E	640	1000	1220	1100	580	298	262	940	490	153	160
040E	640	1100	1320	1200	580	331	289	1040	550	175	183
050E	720	1100	1520	1400	660	309	341	1040	700	206	216
060E	720	1200	1620	1500	660	395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

★ Note

- 1、 Heating coils ≤ 2 rows.
- 2、 Wet-film thickness ≤ 100mm.
- 3、 If panel filter instead of external slide filter ,the length of A plus 40mm.
- 4、 The fan outlet direction of DV1 is UF.
- 5、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

### Horizontal Type 1

Pre-filter+Cooling coil+Fan section



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

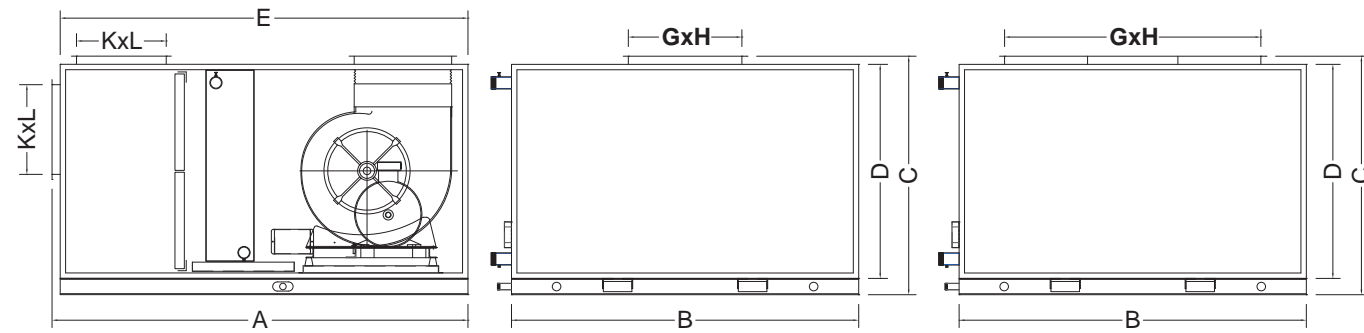
★ Note

- 1、 Heating coils ≤ 2 rows.
- 2、 Wet-film thickness ≤ 100mm.
- 3、 TAD400~500EH unit has double cooling coil.
- 4、 If panel filter instead of external slide filter ,the length of A plus 40mm.
- 5、 If the fan outlet is FT, C which in the table above need to minus 40mm
- 6、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.



## Horizontal Type 2

Mixing box+Pre-filter+Cooling coil+Fan section



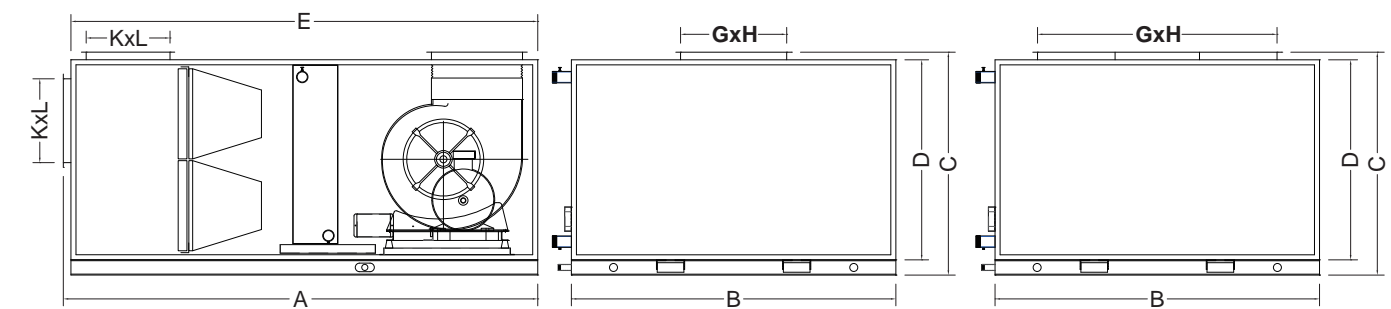
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	1540	853	690	570	1500	232	262	600	160	158	164
030E	1640	953	720	600	1600	298	262	600	300	177	184
040E	1640	1053	790	670	1600	331	289	700	300	201	208
050E	1640	1053	920	800	1600	309	341	800	300	230	240
060E	1640	1153	990	870	1600	395	341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

★ Note

- 1、 Heating coils ≤ 2 rows.
- 2、 Wet-film thickness ≤ 100mm.
- 3、 TAD400~500EH unit has double cooling coil.
- 4、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Horizontal Type 3

Mixing box+Pre-filter+Secondary bag filter+Cooling coil+Fan section



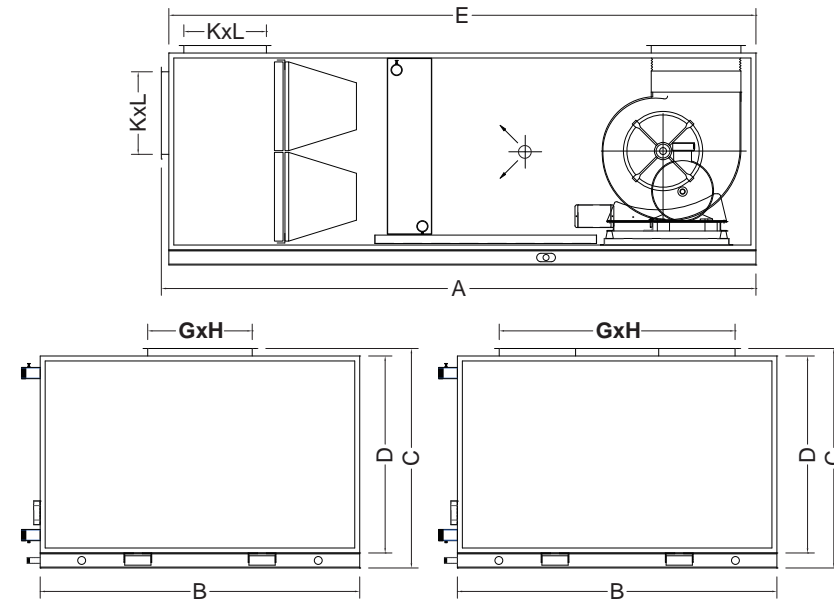
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	1990	853	690	570	1950	232	262	600	160	176	181
030E	2040	953	720	600	2000	298	262	600	300	197	201
040E	2090	1053	790	670	2050	331	289	700	300	224	232
050E	2090	1053	920	800	2050	309	341	800	300	249	259
060E	2090	1153	990	870	2050	395	341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

★ Note

- 1、 Heating coils ≤ 2 rows.
- 2、 Wet-film thickness ≤ 100mm.
- 3、 TAD400~500EH unit has double cooling coil.
- 4、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.
- 5、 Primary filter:G3,flat type.Secondary filter:F5,bag type.

## Horizontal Type 4

Mixing box+Pre-filter+Secondary bag filter+Cooling coil+High-pressure spray humidifier+Fan section



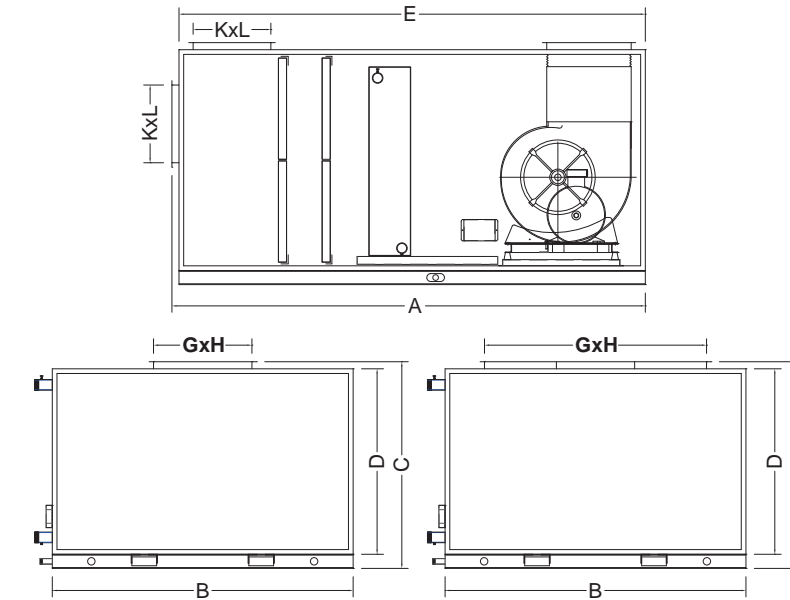
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
090E	3340	1353	1170	1050	3300	430	478	1000	440	522	540
105E	3340	1553	1170	1050	3300	430	478	1100	440	574	591
120E	3390	1703	1170	1050	3350	557	478	1200	440	621	644
135E	3290	1953	1170	1050	3250	1040	404	1300	440	762	786
150E	3290	1953	1270	1150	3250	1040	404	1500	440	786	809
180E	3440	2153	1320	1200	3400	1203	478	1700	440	910	942
210E	3440	2353	1370	1250	3400	1203	478	1900	440	1003	1036
240E	3440	2653	1390	1250	3400	1572	478	2200	440	1180	1217
270E	3640	2653	1520	1380	3600	1572	478	2200	580	1256	1300
300E	3690	2653	1640	1500	3650	1572	478	2300	580	1317	1376
330E	3740	2903	1640	1500	3700	1588	569	2400	580	1485	1550
350E	3840	3053	1640	1500	3800	1776	638	2400	580	1553	1623
400E	3840	3053	1893	1753	3800	1776	638	2600	580	1617	1711
450E	3840	3053	2020	1880	3800	1776	638	2800	580	1738	1856
500E	3940	3153	2150	2010	3900	1776	638	2800	630	1791	1926

★ Note

- 1、Heating coils ≤ 2 rows.
- 2、Wet-film thickness ≤ 100mm.
- 3、TAD400~500EH unit has double cooling coil.
- 4、The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Horizontal Type 5

Mixing box+Pre-filter+Activated carbon filter+Cooling coil+Fan section



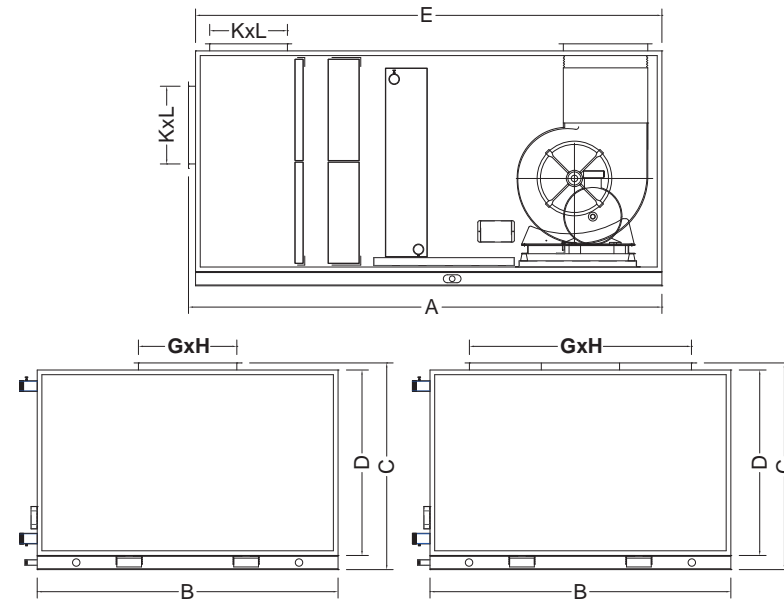
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	1640	853	720	600	1600	232	262	600	160	136	141
030E	1740	953	720	600	1700	298	262	600	300	155	159
040E	1740	1053	790	670	1700	331	289	700	300	179	187
050E	1740	1053	920	800	1700	309	341	800	300	206	213
060E	1740	1153	990	870	1700	395	341	900	300	230	243
070E	1840	1203	1070	950	1800	373	404	1000	300	256	270
080E	1840	1353	1070	950	1800	373	404	1100	300	287	307
090E	2090	1353	1170	1050	2050	430	478	1000	440	338	356
105E	2090	1553	1170	1050	2050	430	478	1100	440	357	392
120E	2140	1703	1170	1050	2100	557	478	1200	440	406	429
135E	2040	1953	1170	1050	2000	1040	404	1300	440	504	528
150E	2040	1953	1270	1150	2000	1040	404	1500	440	556	579
180E	2190	2153	1320	1200	2150	1203	478	1700	440	657	689
210E	2190	2353	1370	1250	2150	1203	478	1900	440	729	762
240E	2190	2653	1390	1250	2150	1572	478	2200	440	803	840
270E	2390	2653	1520	1380	2350	1572	478	2200	580	896	940
300E	2440	2653	1640	1500	2400	1572	478	2300	580	943	1002
330E	2490	2903	1640	1500	2450	1588	569	2400	580	1099	1164
350E	2590	3053	1640	1500	2550	1776	638	2400	580	1156	1226
400E	2640	3053	1893	1753	2600	1776	638	2600	580	1210	1304
450E	2640	3053	2020	1880	2600	1776	638	2800	580	1323	1441
500E	2740	3153	2150	2010	2700	1776	638	2800	630	1357	1492

★ Note

- 1、Heating coils ≤ 2 rows.
- 2、Wet-film thickness ≤ 100mm.
- 3、TAD400~500EH unit has double cooling coil.
- 4、The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Horizontal Type 6

Mixing box+Pre-filter+Electrostatic dust collection+Cooling coil+Fan section



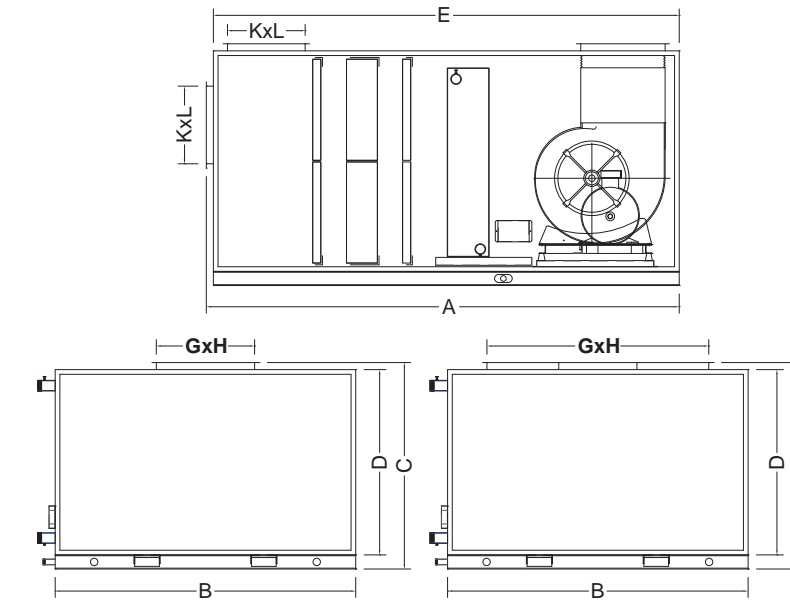
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	1990	853	720	600	1950	232	262	600	160	188	193
030E	2040	953	790	670	2000	298	262	600	300	215	219
040E	2090	1113	790	670	2050	331	289	700	300	254	262
050E	2090	1113	920	800	2050	309	341	800	300	279	289
060E	2090	1153	990	870	2050	395	341	900	300	312	325
070E	2190	1203	1170	1050	2150	373	404	1000	300	352	366
080E	2190	1353	1170	1050	2150	373	404	1100	300	387	404
090E	2440	1453	1170	1050	2400	430	478	1000	440	442	460
105E	2440	1553	1170	1050	2400	430	478	1100	440	493	510
120E	2490	1703	1170	1050	2450	557	478	1200	440	531	554
135E	2390	1953	1170	1050	2350	1040	404	1300	440	646	670
150E	2390	2103	1270	1150	2350	1040	404	1500	440	712	735
180E	2540	2153	1320	1200	2500	1203	478	1700	440	817	849
210E	2540	2353	1420	1300	2500	1203	478	1900	440	917	950
240E	2540	2653	1440	1300	2500	1572	478	2200	440	1005	1042
270E	2740	2653	1520	1380	2700	1572	478	2200	580	1110	1154
300E	2790	2803	1640	1500	2750	1572	478	2300	580	1177	1236
330E	2840	2903	1640	1500	2800	1588	569	2400	580	1329	1394
350E	2940	3153	1640	1500	2900	1776	638	2400	580	1414	1484
400E	2940	3053	1893	1753	2900	1776	638	2600	580	1498	1592
450E	2940	3053	2043	1903	2900	1776	638	2800	580	1637	1755
500E	3040	3153	2150	2010	3000	1776	638	2800	680	1714	1849

★ Note

- 1、 Heating coils ≤ 2 rows.
- 2、 Wet-film thickness ≤ 100mm.
- 3、 TAD400~500EH unit has double cooling coil.
- 4、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Horizontal Type 7

Mixing box+Pre-filter+Electrostatic dust collection+Activated carbon filter+Cooling coil+Fan section



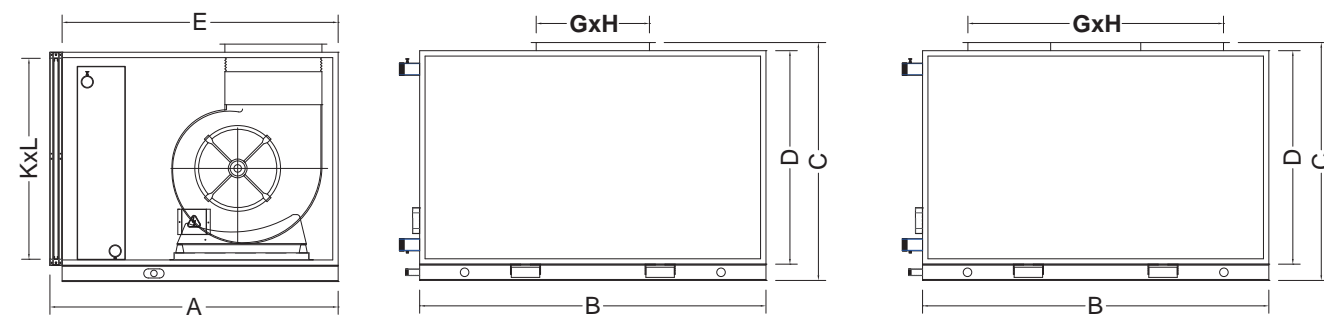
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	2090	853	720	600	2050	232	262	600	160	188	193
030E	2140	953	790	670	2100	298	262	600	300	215	219
040E	2190	1113	790	670	2150	331	289	700	300	254	262
050E	2190	1113	920	800	2150	309	341	800	300	279	289
060E	2190	1153	990	870	2150	395	341	900	300	312	325
070E	2290	1203	1170	1050	2250	373	404	1000	300	352	366
080E	2290	1353	1170	1050	2250	373	404	1100	300	387	404
090E	2540	1453	1170	1050	2500	430	478	1000	440	442	460
105E	2540	1553	1170	1050	2500	430	478	1100	440	493	510
120E	2590	1703	1170	1050	2550	557	478	1200	440	531	554
135E	2490	1953	1170	1050	2450	1040	404	1300	440	646	670
150E	2490	2103	1270	1150	2450	1040	404	1500	440	712	735
180E	2640	2153	1320	1200	2600	1203	478	1700	440	817	849
210E	2640	2353	1420	1300	2600	1203	478	1900	440	917	950
240E	2640	2653	1440	1300	2600	1572	478	2200	440	1005	1042
270E	2840	2653	1520	1380	2800	1572	478	2200	580	1110	1154
300E	2890	2803	1640	1500	2850	1572	478	2300	580	1177	1236
330E	2940	2903	1640	1500	2900	1588	569	2400	580	1329	1394
350E	3040	3153	1640	1500	3000	1776	638	2400	580	1414	1484
400E	3040	3053	1893	1753	3000	1776	638	2600	580	1498	1592
450E	3040	3053	2043	1903	3000	1776	638	2800	580	1637	1755
500E	3140	3153	2150	2010	3100	1776	638	2800	680	1714	1849

★ Note

- 1、 Heating coils ≤ 2 rows.
- 2、 Wet-film thickness ≤ 100mm.
- 3、 TAD400~500EH unit has double cooling coil.
- 4、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Horizontal Type 8

Pre-filter+Heating coil+Fan section



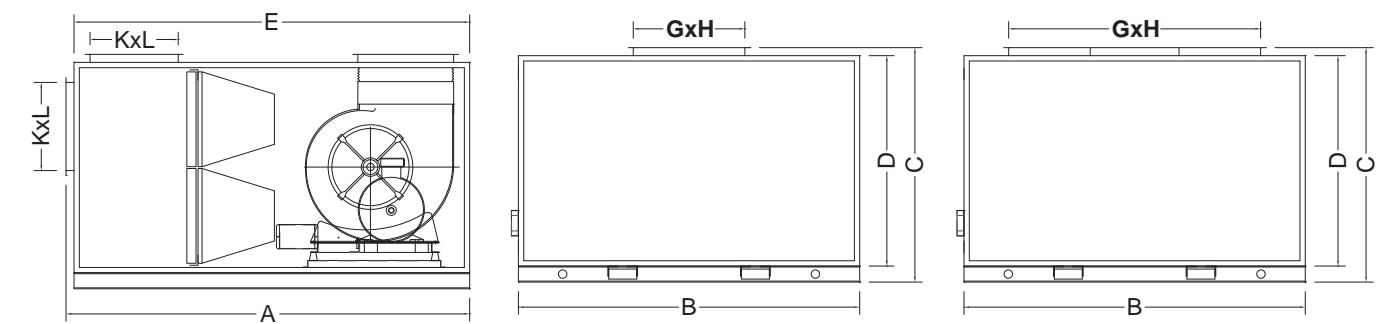
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)	
										4rows	6rows
020E	1060	853	720	600	1000	232	262	793	540	116	120
030E	1160	953	720	600	1100	298	262	893	540	141	145
040E	1160	1053	790	670	1100	331	289	993	610	159	163
050E	1160	1053	920	800	1100	309	341	993	740	175	181
060E	1160	1153	990	870	1100	395	341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

★ Note

- 1、 If panel filter instead of external slide filter ,the length of A plus 40mm.
- 2、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Horizontal Type 9

Mixing box+Pre-filter+Secondary bag filter+Fan section



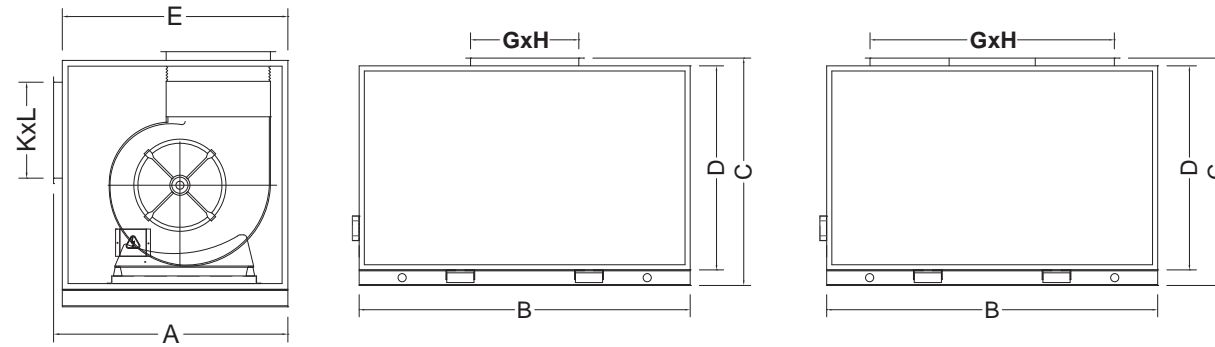
Model TAD	A	B	C	D	E	G	H	K	L	Weight(kg)
020E	1540	853	720	600	1500	232	262	600	160	146
030E	1640	953	720	600	1600	298	262	600	300	163
040E	1640	1053	790	670	1600	331	289	700	300	187
050E	1640	1053	920	800	1600	309	341	800	300	210
060E	1640	1153	990	870	1600	395	341	900	300	235
070E	1740	1203	1070	950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

★ Note

- 1、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.
- 2、 Primary filter:G3,flat type.Secondary filter:F5,bag type.

## Horizontal Type 10

Air inlet section+Fan section



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

★ Note

1、 The dimension above is TAD.The width and height of TMD is 20mm more than TAD.The width and height of TBD is 50mm more than TAD.

## Standard ESP And Motor Power

### Vertical Type

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)											
			120	170	220	270	320	370	420	470	520	570	620	
020E	2000	4	0.55	0.55	0.55	0.55	0.55							
		6	0.55	0.55	0.55	0.55	0.75							
030E	3000	4	0.55	0.75	0.75	0.75	1.1							
		6	0.75	0.75	0.75	1.1	1.1							
040E	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						
050E	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						
060E	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						
070E	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					
080E	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					
090E	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					
105E	10500	4	2.2	3.0	3.0	3.0	3.0	3.0	3.0	4.0				
		6	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0				
120E	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	4.0	5.5		
135E	13500	4	3.0	3.0	3.0	4.0	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	5.5		
150E	15000	4	3.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5	7.5		
		6	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5	5.5	7.5		
180E	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		
210E	21000	4				5.5	7.5	7.5	7.5	7.5	7.5	11.0	11.0	
		6				7.5	7.5	7.5	7.5	7.5	11.0	11.0	11.0	
240E	24000	4				5.5	7.5	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	11.0
270E	27000	4				7.5	7.5	11.0	11.0	11.0	11.0	11.0	11.0	15.0
		6				7.5	11.0	11.0	11.0	11.0	11.0	11.0	11.0	15.0
300E	30000	4				11.0	11.0	11.0	11.0	11.0	11.0	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
330E	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	15.0
350E	35000	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	15.0
400E	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
450E	45000	4						15.0	15.0	15.0	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
500E	50000	4							18.5	18.5	18.5	22.0	22.0	
		6							18.5	18.5	22.0	22.0		

★ Note

1、 ESP for option , if needed ,please contact factory.

### Horizontal Type 1

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)								
			170	220	270	320	370	420	470	520	570
020E	2000	4	0.55	0.55	0.55	0.55	0.75				
		6	0.55	0.55	0.55	0.75	0.75				
030E	3000	4	0.75	0.75	0.75	1.1	1.1				
		6	0.75	0.75	1.1	1.1	1.1				
040E	4000	4	1.1	1.1	1.1	1.1	1.5				
		6	1.1	1.1	1.1	1.5	1.5				
050E	5000	4		1.1	1.5	1.5	1.5	1.5	2.2		
		6		1.5	1.5	1.5	1.5	2.2	2.2		
060E	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		
070E	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		
080E	8000	4		2.2	2.2	2.2	3.0	3.0	3.0		
		6		2.2	2.2	3.0	3.0	3.0	3.0		
090E	9000	4		2.2	2.2	3.0	3.0	3.0	3.0		
		6		2.2	3.0	3.0	3.0	3.0	4.0		
105E	10500	4		3.0	3.0	3.0	3.0	4.0	4.0		
		6		3.0	3.0	3.0	4.0	4.0	4.0		
120E	12000	4		3.0	3.0	3.0	4.0	4.0	4.0		
		6		3.0	3.0	4.0	4.0	4.0	4.0		
135E	13500	4		3.0	4.0	4.0	4.0	4.0	5.5		
		6		4.0	4.0	4.0	4.0	5.5	5.5		
150E	15000	4		4.0	4.0	5.5	5.5	5.5	5.5	5.5	
		6		4.0	5.5	5.5	5.5	5.5	5.5	7.5	
180E	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	
210E	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	
240E	24000	4		5.5	7.5	7.5	7.5	11.0	11.0	11.0	
		6		7.5	7.5	7.5	11.0	11.0	11.0	11.0	
270E	27000	4		7.5	7.5	11.0	11.0	11.0	11.0	11.0	11.0
		6		7.5	11.0	11.0	11.0	11.0	11.0	11.0	15.0
300E	30000	4		11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0
		6		11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0
330E	33000	4				11.0	11.0	15.0	15.0	15.0	
		6				11.0	15.0	15.0	15.0	15.0	
350E	35000	4				11.0	11.0	11.0	15.0	15.0	
		6				11.0	11.0	15.0	15.0	15.0	
400E	40000	4				15.0	15.0	15.0	15.0	15.0	
		6				15.0	15.0	15.0	15.0	18.5	
450E	45000	4				15.0	15.0	18.5	18.5	18.5	
		6				15.0	18.5	18.5	18.5	18.5	
500E	50000	4				18.5	18.5	22.0	22.0	22.0	
		6				18.5	22.0	22.0	22.0		

★ Note

1、ESP for option , if needed ,please contact factory.

### Horizontal Type 2

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)								
			170	220	270	320	370	420	470	520	570
020E	2000	4	0.55	0.55	0.75	0.75	0.75				
		6	0.55	0.75	0.75	0.75	0.75				
030E	3000	4	0.75	0.75	1.1	1.1	1.1				
		6	0.75	1.1	1.1	1.1	1.1				
040E	4000	4	1.1	1.1	1.1	1.5	1.5				
		6	1.1	1.1	1.5	1.5	1.5				
050E	5000	4		1.1	1.5	1.5	1.5	1.5			
		6		1.5	1.5	1.5	1.5	2.2			
060E	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		
070E	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		
080E	8000	4		2.2	2.2	2.2	3.0	3.0	3.0	3.0	
		6		2.2	2.2	3.0	3.0	3.0	3.0	3.0	
090E	9000	4		2.2	2.2	3.0	3.0	3.0	3.0	4.0	
		6		2.2	3.0	3.0	3.0	3.0	4.0	4.0	
105E	10500	4		3.0	3.0	3.0	3.0	4.0	4.0	4.0	
		6		3.0	3.0	3.0	4.0	4.0	4.0	4.0	
120E	12000	4		3.0	3.0	3.0	4.0	4.0	4.0	4.0	
		6		3.0	3.0	4.0	4.0	4.0	4.0	5.5	
135E	13500	4		3.0	4.0	4.0	4.0	4.0	5.5	5.5	
		6		4.0	4.0	4.0	4.0	5.5	5.5	5.5	
150E	15000	4		4.0	4.0	5.5	5.5	5.5	5.5	5.5	7.5
		6		4.0	5.5	5.5	5.5	5.5	5.5	5.5	7.5
180E	18000	4		5.5	5.5	5.5	5.5	7.5	7.5	7.5	7.5
		6		5.5	5.5	5.5	7.5	7.5	7.5	7.5	7.5
210E	21000	4		5.5	7.5	7.5	7.5	7.5	11.0	11.0	11.0
		6		7.5	7.5	7.5	7.5	11.0	11.0	11.0	11.0
240E	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
270E	27000	4		7.5	7.5	11.0	11.0	11.0	11.0	11.0	11.0
		6		7.5	11.0	11.0	11.0	11.0	11.0	11.0	15.0
300E	30000	4		11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0
		6		11.0	11.0	11.0	11.0	15.0	15.0	15.0	15.0
330E	33000	4				11.0	11.0	15.0	15.0	15.0	15.0
		6				11.0	15.0	15.0	15.0	15.0	15.0
350E	35000	4				11.0	11.0	11.0	15.0	15.0	15.0
		6				11.0	11.0	15.0	15.0	15.0	15.0
400E	40000	4				15.0	15.0	15.0	15.0	15.0	15.0
		6				15.0	15.0	15.0	15.0	18.5	18.5
450E	45000	4				15.0	15.0	18.5	18.5	18.5	18.5
		6				15.0	18.5	18.5	18.5	18.5	22.0
500E	50000	4				18.5	18.5	22.0	22.0	22.0	22.0
		6				18.5	22.0	22.0	22.0	22.0	22.0

★ Note

1、ESP for option , if needed ,please contact factory.

### Horizontal Type 3

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)								
			120	170	220	270	320	370	420	470	520
020E	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	
030E	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		
040E	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	
050E	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	
060E	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		
070E	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	
080E	8000	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	
090E	9000	4				3.0	3.0	4.0	4.0	4.0	
		6				3.0	4.0	4.0	4.0	4.0	
105E	10500	4				4.0	4.0	4.0	4.0	5.5	
		6				4.0	4.0	4.0	5.5	5.5	
120E	12000	4				4.0	4.0	5.5	5.5	5.5	
		6				4.0	5.5	5.5	5.5	5.5	
135E	13500	4				4.0	5.5	5.5	5.5	5.5	
		6				5.5	5.5	5.5	5.5	7.5	
150E	15000	4				5.5	5.5	5.5	7.5	7.5	
		6				5.5	5.5	7.5	7.5	7.5	
180E	18000	4				7.5	7.5	7.5	7.5	7.5	
		6				7.5	7.5	7.5	7.5	11.0	
210E	21000	4				7.5	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	11.0	
240E	24000	4				11.0	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0		
270E	27000	4				11.0	11.0	11.0	11.0	15.0	
		6				11.0	11.0	11.0	15.0	15.0	
300E	30000	4				11.0	15.0	15.0	15.0	15.0	
		6				15.0	15.0	15.0	15.0		
330E	33000	4				15.0	15.0	15.0	15.0	15.0	15.0
		6				15.0	15.0	15.0	15.0	15.0	18.5
350E	35000	4				15.0	15.0	15.0	15.0	15.0	15.0
		6				15.0	15.0	15.0	15.0	15.0	18.5
400E	40000	4				15.0	15.0	15.0	18.5	18.5	18.5
		6				15.0	15.0	18.5	18.5	18.5	18.5
450E	45000	4				18.5	18.5	18.5	18.5	22.0	22.0
		6				18.5	18.5	18.5	22.0	22.0	
500E	50000	4				22.0	22.0	22.0			
		6				22.0	22.0				

★ Note

1、ESP for option , if needed ,please contact factory.

### Horizontal Type 4

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)					
			190	240	290	330	380	430
090E	9000	4	3.0	3.0	4.0	4.0	4.0	
		6	3.0	4.0	4.0	4.0	4.0	
105E	10500	4	4.0	4.0	4.0	4.0	5.5	
		6	4.0	4.0	4.0	5.5	5.5	
120E	12000	4	4.0	4.0	5.5	5.5	5.5	
		6	4.0	5.5	5.5	5.5	5.5	
135E	13500	4	4.0	5.5	5.5	5.5	5.5	
		6	5.5	5.5	5.5	5.5	7.5	
150E	15000	4	5.5	5.5	5.5	7.5	7.5	
		6	5.5	5.5	7.5	7.5	7.5	
180E	18000	4	7.5	7.5	7.5	7.5	7.5	
		6	7.5	7.5	7.5	7.5	11.0	
210E	21000	4	7.5	11.0	11.0	11.0	11.0	
		6	11.0	11.0	11.0	11.0	11.0	
240E	24000	4	11.0	11.0	11.0	11.0	11.0	
		6	11.0	11.0	11.0	11.0		
270E	27000	4	11.0	11.0	11.0	11.0	15.0	
		6	11.0	11.0	11.0	15.0	15.0	
300E	30000	4	11.0	15.0	15.0	15.0	15.0	
		6	15.0	15.0	15.0	15.0		
330E	33000	4	15.0	15.0	15.0	15.0	15.0	15.0
		6	15.0	15.0	15.0	15.0	15.0	18.5
350E	35000	4	15.0	15.0	15.0	15.0	15.0	15.0
		6	15.0	15.0	15.0	15.0	15.0	18.5
400E	40000	4	15.0	15.0	15.0	18.5	18.5	18.5
		6	15.0	15.0	18.5	18.5	18.5	18.5
450E	45000	4	18.5	18.5	18.5	18.5	22.0	22.0
		6	18.5	18.5	18.5	22.0	22.0	
500E	50000	4	22.0	22.0	22.0			
		6	22.0	22.0				

★ Note

1、ESP for option , if needed ,please contact factory.

### Horizontal Type 5

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)								
			140	190	240	290	340	390	440	490	540
020E	2000	4	0.55	0.55	0.75	0.75	0.75				
		6	0.55	0.75	0.75	0.75	0.75				
030E	3000	4	0.75	0.75	1.1	1.1	1.1				
		6	0.75	1.1	1.1	1.1	1.1				
040E	4000	4	1.1	1.1	1.1	1.5	1.5				
		6	1.1	1.1	1.5	1.5	1.5				
050E	5000	4	1.1	1.5	1.5	1.5	1.5				
		6	1.5	1.5	1.5	1.5	2.2				
060E	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			
070E	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			
080E	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		
090E	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		
105E	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		
120E	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		
135E	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		
150E	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	
180E	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	
210E	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	
240E	24000	4				7.5	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	11.0	
270E	27000	4				11.0	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	15.0	
300E	30000	4				11.0	11.0	15.0	15.0	15.0	
		6				11.0	15.0	15.0	15.0	15.0	
330E	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	18.5
350E	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	18.5
400E	40000	4					15.0	15.0	15.0	18.5	18.5
		6					15.0	15.0	18.5	18.5	18.5
450E	45000	4						18.5	18.5	18.5	22.0
		6						18.5	18.5	18.5	22.0
500E	50000	4							22.0	22.0	
		6							22.0	22.0	

★ Note

1、ESP for option , if needed ,please contact factory.

### Horizontal Type 6

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)								
			140	190	240	290	340	390	440	490	540
020E	2000	4	0.55	0.55	0.75	0.75	0.75				
		6	0.55	0.75	0.75	0.75	0.75				
030E	3000	4	0.75	0.75	1.1	1.1	1.1				
		6	0.75	1.1	1.1	1.1	1.1				
040E	4000	4	1.1	1.1	1.1	1.5	1.5				
		6	1.1	1.1	1.5	1.5	1.5				
050E	5000	4	1.1	1.5	1.5	1.5	1.5				
		6	1.5	1.5	1.5	1.5	2.2				
060E	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			
070E	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			
080E	8000	4		2.2	2.2	3.0	3.0	3.0	3.0	3.0	
		6		2.2	3.0	3.0	3.0	3.0	3.0	3.0	
090E	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		
105E	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		
120E	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		
135E	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		
150E	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	
180E	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	
210E	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	
240E	24000	4				7.5	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	11.0	
270E	27000	4				11.0	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	15.0	
300E	30000	4				11.0	11.0	15.0	15.0	15.0	
		6				11.0	15.0	15.0	15.0	15.0	
330E	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	18.5
350E	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	18.5
400E	40000	4					15.0	15.0	15.0	18.5	18.5
		6					15.0	15.0	18.5	18.5	18.5
450E	45000	4						18.5	18.5	18.5	22.0
		6						18.5	18.5	18.5	22.0
500E	50000	4							22.0	22.0	
		6							22.0	22.0	

★ Note

1、ESP for option , if needed ,please contact factory.



### Horizontal Type 7

Model TAD	Air Volume (m³/h)	Rows of cooling coil	ESP(Pa) and motor power(kW)								
			100	150	200	250	300	350	400	450	500
020E	2000	4	0.55	0.55	0.75	0.75	0.75				
		6	0.55	0.75	0.75	0.75	0.75				
030E	3000	4	0.75	0.75	1.1	1.1	1.1				
		6	0.75	1.1	1.1	1.1	1.1				
040E	4000	4	1.1	1.1	1.1	1.5	1.5				
		6	1.1	1.1	1.5	1.5	1.5				
050E	5000	4	1.1	1.5	1.5	1.5	1.5				
		6	1.5	1.5	1.5	1.5	2.2				
060E	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			
070E	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			
080E	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		
090E	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		
105E	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		
120E	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		
135E	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		
150E	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	
180E	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	
210E	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	
240E	24000	4				7.5	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	11.0	
270E	27000	4				11.0	11.0	11.0	11.0	11.0	
		6				11.0	11.0	11.0	11.0	15.0	
300E	30000	4				11.0	11.0	15.0	15.0	15.0	
		6				11.0	15.0	15.0	15.0	15.0	
330E	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
350E	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
400E	40000	4					15.0	15.0	15.0	18.5	18.5
		6					15.0	15.0	18.5	18.5	18.5
450E	45000	4						18.5	18.5	18.5	22.0
		6						18.5	18.5	18.5	22.0
500E	50000	4							22.0	22.0	
		6							22.0	22.0	

### Horizontal Type 8

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

★ Note

- 1、ESP for option , if needed ,please contact factory.
- 2、1 row heating coil :the ESP is above.2 rows heating coil: ESP minus 30Pa,but motor power is the same as the table above.

★ Note

- 1、ESP for option , if needed ,please contact factory.

### Horizontal Type 9

Model TAD	Air Volume (m <sup>3</sup> /h)	ESP(Pa) and motor power(kW)								
		200	250	300	350	400	450	500	550	600
020E	2000	0.55	0.75	0.75	0.75	0.75	1.1	1.1	1.1	
030E	3000	0.75	1.1	1.1	1.1	1.1	1.1	1.5	1.5	
040E	4000	1.1	1.1	1.5	1.5	1.5	2.2	2.2	2.2	
050E	5000	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2	
060E	6000	2.2	2.2	2.2	2.2	2.2	3.0	3.0	3.0	
070E	7000		2.2	2.2	2.2	2.2	3.0	3.0	3.0	
080E	8000		2.2	3.0	3.0	3.0	3.0	3.0	3.0	
090E	9000				3.0	3.0	4.0	4.0	4.0	
105E	10500				4.0	4.0	4.0	4.0	5.5	
120E	12000				4.0	4.0	5.5	5.5	5.5	
135E	13500				4.0	5.5	5.5	5.5	5.5	
150E	15000				5.5	5.5	5.5	7.5	7.5	
180E	18000				7.5	7.5	7.5	7.5	7.5	
210E	21000				7.5	11.0	11.0	11.0	11.0	
240E	24000				11.0	11.0	11.0	11.0	11.0	
270E	27000				11.0	11.0	11.0	11.0	15.0	
300E	30000				11.0	15.0	15.0	15.0	15.0	

### Horizontal Type 10

Model TAD	Air Volume (m <sup>3</sup> /h)	ESP(Pa) and motor power(kW)								
		250	300	350	400	450	500	550	600	650
020E	2000	0.55	0.55	0.55	0.55	0.75				
030E	3000	0.75	0.75	0.75	1.1	1.1				
040E	4000	1.1	1.1	1.1	1.1	1.5				
050E	5000		1.1	1.5	1.5	1.5	1.5	2.2		
060E	6000		1.5	2.2	2.2	2.2	2.2	2.2		
070E	7000		1.5	2.2	2.2	2.2	2.2	2.2		
080E	8000		2.2	2.2	2.2	3.0	3.0	3.0		
090E	9000		2.2	2.2	3.0	3.0	3.0	3.0		
105E	10500		3.0	3.0	3.0	3.0	4.0	4.0		
120E	12000		3.0	3.0	3.0	4.0	4.0	4.0		
135E	13500		3.0	4.0	4.0	4.0	4.0	5.5		
150E	15000		4.0	4.0	5.5	5.5	5.5	5.5	5.5	
180E	18000		5.5	5.5	5.5	5.5	7.5	7.5	7.5	
210E	21000		5.5	7.5	7.5	7.5	7.5	11.0	11.0	
240E	24000		5.5	7.5	7.5	7.5	11.0	11.0	11.0	
270E	27000		7.5	7.5	11.0	11.0	11.0	11.0	11.0	11.0
300E	30000		11.0	11.0	11.0	11.0	11.0	15.0	15.0	15.0

★ Note

- 1、ESP for option , if needed ,please contact factory.
- 2、Motor power above is for F5/F6 filter.And motor power will increase when secondary filter is F7/F8.

★ Note

- 1、ESP for option , if needed ,please contact factory.

## Humidification Performance

### Unit with High-pressure Spray Humidifier Data

Model	Air Volume(m <sup>3</sup> /h)	Fresh air humidifying Capacity(kg/h)	Mixing air humidifying Capacity(kg/h)
090E	9000	90	27
105E	10500	105	32
120E	12000	120	36
135E	13500	135	41
150E	15000	150	45
180E	18000	180	54
210E	21000	210	63
240E	24000	240	72
270E	27000	270	81
300E	30000	300	90
330E	33000	330	99
350E	35000	350	105
400E	40000	400	120
450E	45000	450	135
500E	50000	500	150

### High-pressure spray humidifier

The high-pressure spray humidifier consists of distribution pipe, nozzle of stainless steel and spray humidifying machine, with water spray pressurized by high pressure water pump.

#### Operating conditions

Under the premise of meeting the following operating conditions, select a suitable type of humidifier according to the necessary humidifying capacity and the following technical parameters;

- Supply water quality: Tap water, purified water or equivalent
- Water Pressure: 1- 3.5kg/m<sup>2</sup>
- Water Temperature: 5- 50°C
- Air Velocity: 0.5- 3.5m/s
- AirTemperature: 20- 60°C

★ Note

- 1、 The above moisture quantity is the maximum value for different types of wet--film humidifiers.
- 2、 The fresh air ratio is 30% .

### Unit with Wet-film Humidifier Data

Model	Air Volume (m <sup>3</sup> /h)	Wet-film Face Dimension		Weight(kg)				Fresh air humidifying Capacity(kg/h)				Mixing air humidifying Capacity(kg/h)			
		Height mm	Width mm	50mm Thickness	100mm Thickness	150mm Thickness	200mm Thickness	50mm Thickness	100mm Thickness	150mm Thickness	200mm Thickness	50mm Thickness	100mm Thickness	150mm Thickness	200mm Thickness
020E	2000	660	429	2	4	6	8	5	11	14	15	4	9	11	12
030E	3000	760	493	3	5	8	11	7	15	19	21	6	12	15	16
040E	4000	860	556	3	7	10	14	10	19	24	26	8	16	19	21
050E	5000	860	683	4	8	13	17	12	23	29	32	9	19	23	26
060E	6000	960	747	5	10	15	21	14	29	36	39	11	24	29	32
070E	7000	1010	810	6	12	18	24	16	33	41	45	13	27	33	36
080E	8000	1160	810	7	14	20	27	19	38	47	52	15	31	38	41
090E	9000	1160	937	8	16	23	31	22	43	54	60	17	36	43	48
105E	10500	1360	937	9	18	28	37	25	51	64	70	20	42	51	56
120E	12000	1510	937	10	20	31	41	28	57	71	78	23	47	57	62
135E	13500	1760	937	12	24	36	47	33	66	82	91	26	54	66	73
150E	15000	1760	1001	13	25	38	51	35	70	88	97	28	58	70	78
180E	18000	1960	1064	15	30	45	60	42	83	104	115	33	69	83	92
210E	21000	2160	1128	18	35	53	70	49	97	122	134	39	80	97	107
240E	24000	2460	1128	20	40	60	80	55	111	139	153	44	92	111	122
270E	27000	2460	1255	22	44	67	89	62	123	154	170	49	102	123	136
300E	30000	2460	1382	24	49	73	98	68	136	170	187	54	112	136	150
330E	33000	2710	1382	27	54	81	108	75	150	187	206	60	124	150	165
350E	35000	2860	1382	28	57	85	114	79	158	198	217	63	130	158	174
400E	40000	2660	1620	31	62	93	124	86	172	215	237	69	142	172	190
450E	45000	2760	1747	35	69	104	139	96	193	241	265	77	159	193	212
500E	50000	2860	1874	39	77	116	154	107	214	268	295	86	177	214	236

### Wet-film humidifier

The wet -film is a hydrophilic material which uniformly distributes the water contained over the material surface to form a gasification layer of water. When the air flows through the material surface, the water in the gasification layer is evaporated and gasified, and absorbed by the air. The vaporizing humidifier is produced according to this principle. The wet -film can be of thickness 50 or 100 mm depending on the moisture quantity demand, with water supply being three times of the moisture quantity.

#### Operating conditions

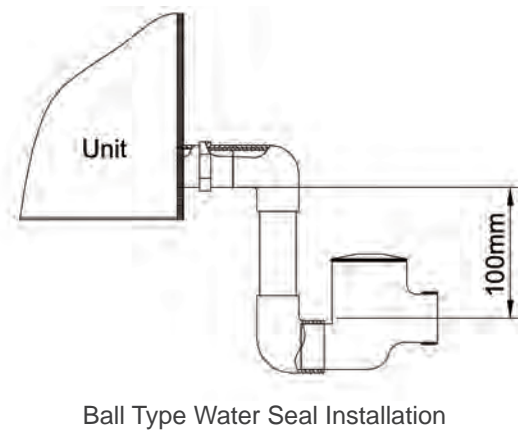
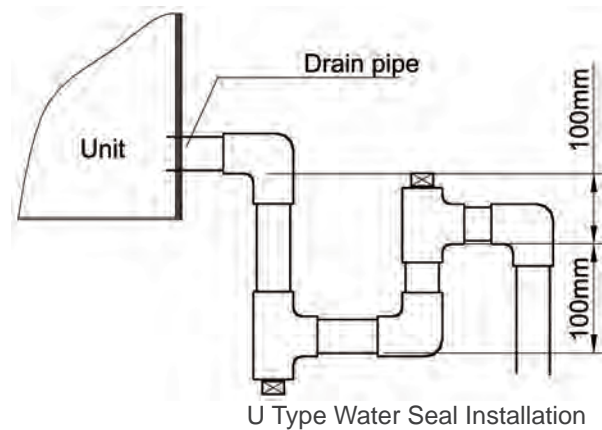
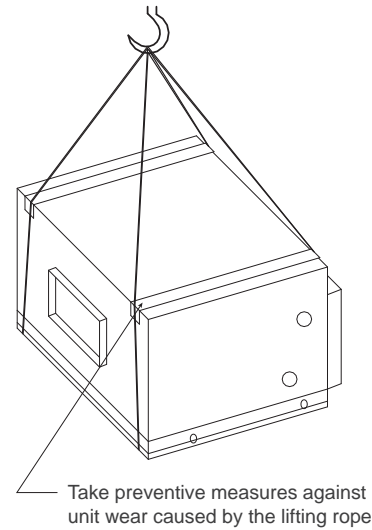
Air Temperature Humidifier:5-80°C ; ≤90%RH
Air Velocity: ≤3.75m/s
Supply water quality: Tap water, purified water
Water Condition:0.05-0.4MPa, 5-40°C
Water supply = 2-3 * moisture quantity, external water supply interface size: DN 15 G1/2
Power Supply AC220V/50HZ

★ Note

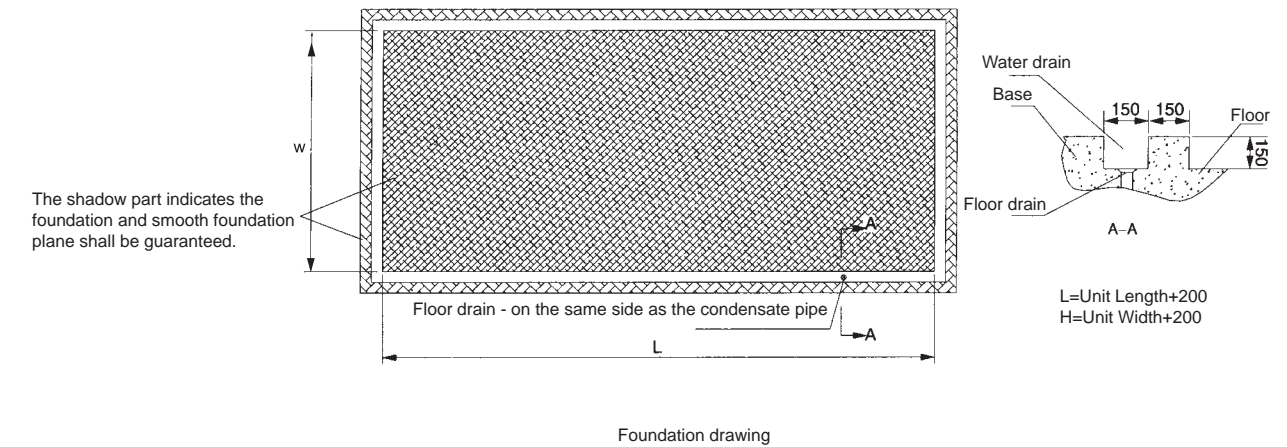
- 1、 Conditions of fresh inlet air: 28°C DB, 10% RH; air face velocity < 3.0 m/s.
- 2、 Conditions of mixed inlet air (fresh air ratio 30%): 28°C DB, 25% RH; air face velocity < 3.0 m/s.
- 3、 The above wet--film weight is dry weight without introduction of water; the operating weight (wet weight) of wet--film humidifier is about 1.5 times the dry weight.
- 4、 The above moisture capacity is the maximum value for different types of wet--film humidifiers.
- 5、 If TAD series unit comes with a wet--film humidifier, the internal resistance shall be increased by 50 mm-20 Pa ,100 mm-30 Pa,150 mm-45 Pa,200 mm-60 Pa correspondingly.

## Installation

- Carefully check the unit for damage before installing it, and please contact the retailer for repair and replacement under any of the following conditions: impact or serious deformation of the unit, obvious scratch that affects the appearance of the unit panel or housing, and looseness or breakaway of the fan or motor.
- For the purpose of safety, hoist the ceiling-mounted unit firmly in the way as shown in the figure on the right, or load/unload and move it with a forklift, ensure the hoisting point is firm with sufficient strength to bear the unit weight and make sure the unit is level.
- Before wiring, check whether the power supply voltage, frequency and phase are consistent with the unit and ensure the power supply voltage deviation doesn't exceed  $\pm 10\%$  of the rated voltage. Before starting the fan, get into the fan case and rotate the fan impeller by hand, carefully check whether there is any metal scraping sound and eliminate the abnormality if any. After switching on the power supply, start the fan, check whether the impeller rotates in the correct direction. In case of incorrect rotation direction, just change the phase sequence of the power supply incoming line.
- It is recommended that a plenum chamber be set at the unit air inlet/outlet, an air volume control valve on the air duct and a fire damper in accordance with fire control requirements. If an electric air volume control valve is installed, start the air valve actuator and then the fan, while close the fan and then the air valve actuator.



- Wash the water pipes before connecting them. Pay attention to the cold (hot) water inflow and outflow directions, connect the pipes as per the marks on the unit, and equip the unit water inlet pipe with a valve and a filter to adjust the flow. In case of overhauling, cut off the cold (hot) water source, prevent impurities from entering the heat exchanger so as not to block it, and use insulated water inlet and outlet pipes for thermal insulation.
- When connecting the water inlet and outlet pipes, fix them with a pipe tong and prevent them from being subject to a torsional force during operation. It is recommended that Teflon tape be used for sealing to avoid water leakage. Condensate water from the unit must be connected at a certain water seal height and drained into the sewer through a drain pipe as shown in the figure above.
- Never make the unit bear the weights of air duct, water pipes, etc. connected with it.
- Earth the unit reliably, and check whether the electric circuits are in good conditions and comply with the electric safety requirements.
- Make sure the unit is installed by professionals who are familiar with the product and relevant local rules and avoid impact, pressing and scratch during installation.



## Precautions for installation and use

- Switch off the power supply when the unit doesn't operate for a long time or in winter.
- To avoid an electric shock, a fire and other possible injuries, always keep in mind the following rules and observe them:
- Never try to install or modify the A/C unit by yourself for improper operation (if any) may cause water leakage, electric shock and fire.
- Never connect the grounding wire of the A/C to the gas pipe, tap water pipe, lightning rod, etc.
- Use the accessories specified by the company and ask the manufacturer or authorized dealer to provide installation and technical services.
- Isolate the unit controller data line and the power supply line to avoid interference.
- Never damage the power supply line, and never turn on or off the A/C unit by plugging or unplugging the power supply.
- Never flush the A/C unit with water directly, otherwise, electric shock or other accidents may occur.
- Never try to repair by yourself for improper repair may cause operation fault or burnout to the unit; please contact the local branch or authorized service provider if repair is needed.
- The air conditioning unit shall not operate in corrosive gas environment, for instance, acid, alkali, salt mist, etc. Otherwise, it may lead to the damage to the unit enclosure, pipeline or electrical elements.
- The space around the unit shall be kept clean, dry and well-ventilated. In case the heat exchanger on the air side can be cleaned regularly (at the interval of 1~2 months), its good heat transfer effect can be maintained and the energy can be saved.
- The drain pipe must be laid according to the requirements in the Instruction to ensure smooth water drainage and proper measures for thermal insulation shall be taken to prevent the generation of condensate. The drain pipe must be inspected before the unit operates. In case of blockage, foreign matters must be eliminated to ensure smooth drainage of the condensate.
- The wiring of the power supply and the electrical system for the unit shall be inspected frequently to confirm whether the wiring is firm, whether electrical elements operate abnormally. In case of abnormalities, the repair and replacement shall be performed in time and the regular inspection shall be conducted to confirm whether the grounding is reliable.

- 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

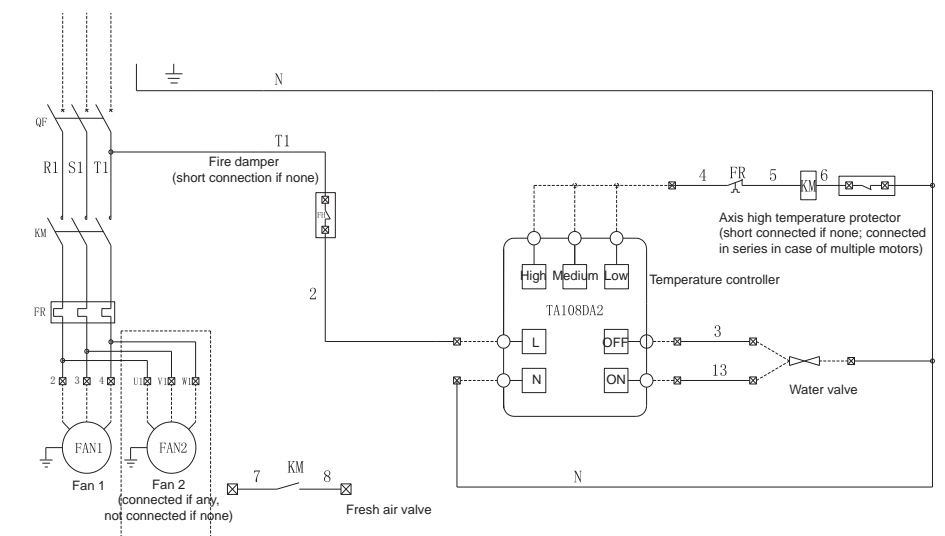
### Installation instructions for the control cabinet

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.



## 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.

DATE	NOTE



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DISCLAIMER NOTE: Data provided herein are not binding and might change without prior notice.