



YORK[®]

YBSE Air Handling Unit

Installation, Operation & Maintenance
Manual

FORM NO.: 6A4F-A01C-NA-EN



:



Air Volume 2000-36000m³/h

Catalogue

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I. Overview

1-1 Brief Introduction

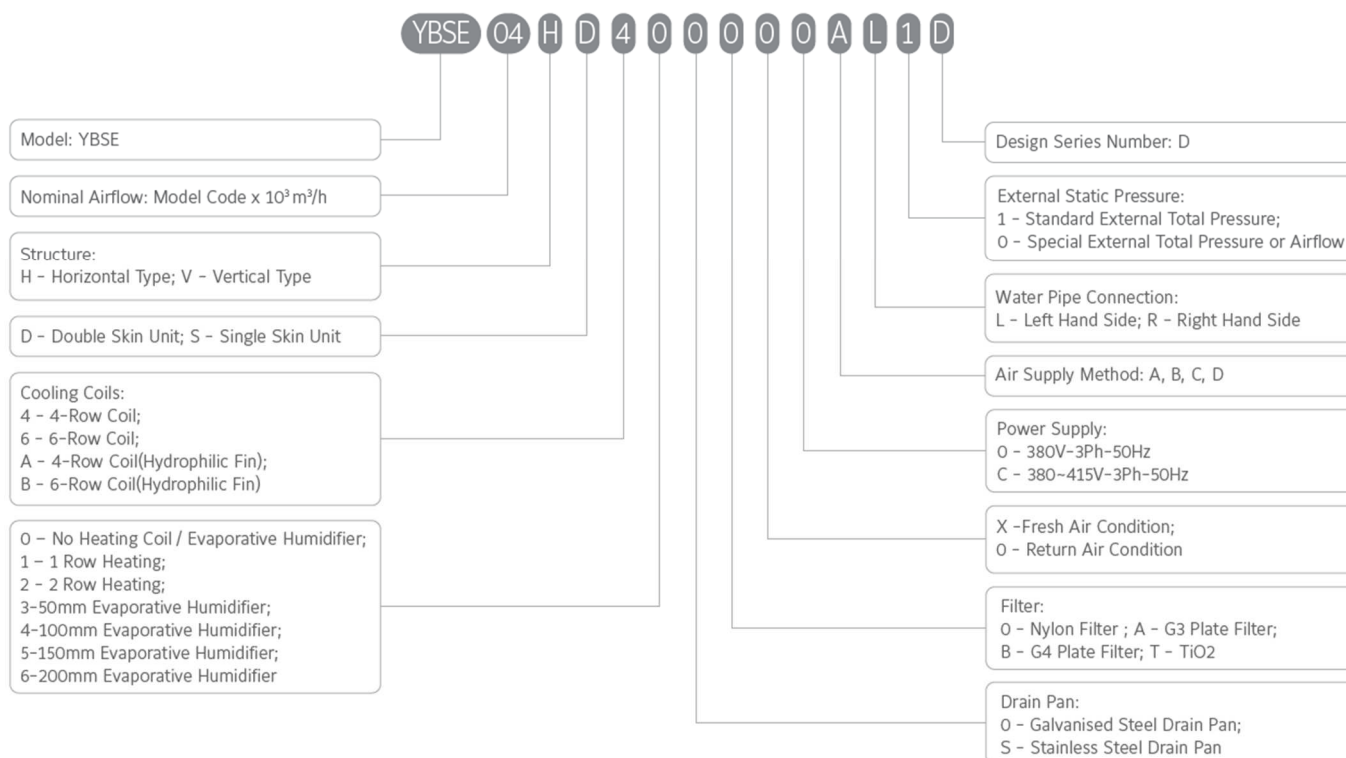
York YBSE series air handling unit is designed for factories, warehouses, office building and shopping malls. It provides them a comfortable air conditioning environment. The coil of this air handling unit can use heating water to heat air in winter, chilled water to cool air in summer. We can supply 34 models of YBSE clients can select it necessity.

Features of YBSE Series of Air Handling Unit:

- **Exquisite & Beautiful Appearance**
All operation panels are made of galvanized steel with best quality. They are continuous leveling, clear and beautiful appearance.
- **Good Stability**
All internal parts and components of air conditioning are set in frame structure with high strength and good stability.
- **High Rate of Heat Transfer**
The coils made of best quality copper pipe and sine wave aluminum fin by mechanical expansion tube. It has high heat transfer efficiency. Equipped with mega air flow fan, air handling unit can exert the most heat transmission efficiency.
- **Quiet Operation**
The air handling unit equips with best quality and low noise level motor, the newest low rotational speed and mega air flow fan. It is driven by belt and pulley, runs very quietly.
- **“Dry Drain Pan”**
Condensate drain pan is “dry drain pan” which makes condensate water be drained out in time.
- **Easy Installation & Low Installation Cost**
Computer was used to design the internal structure. Small size makes you convenient to install the unit in limited space; which makes the installation cost reduced to the lowest. The static pressure in unit is high and you can install the unit by connecting air duct or disconnecting air duct. There are two types for installing supply air: vertical and horizontal.
- **Convenient Cleaning for Filter**
The filters can be drawn out from left or right freely, which can be cleaned conveniently.
- **Options**
 - 1-Row, 2-Row heating Coil
 - Evaporative Humidifier
 - TiO₂ Sterilizer
 - Static Filter

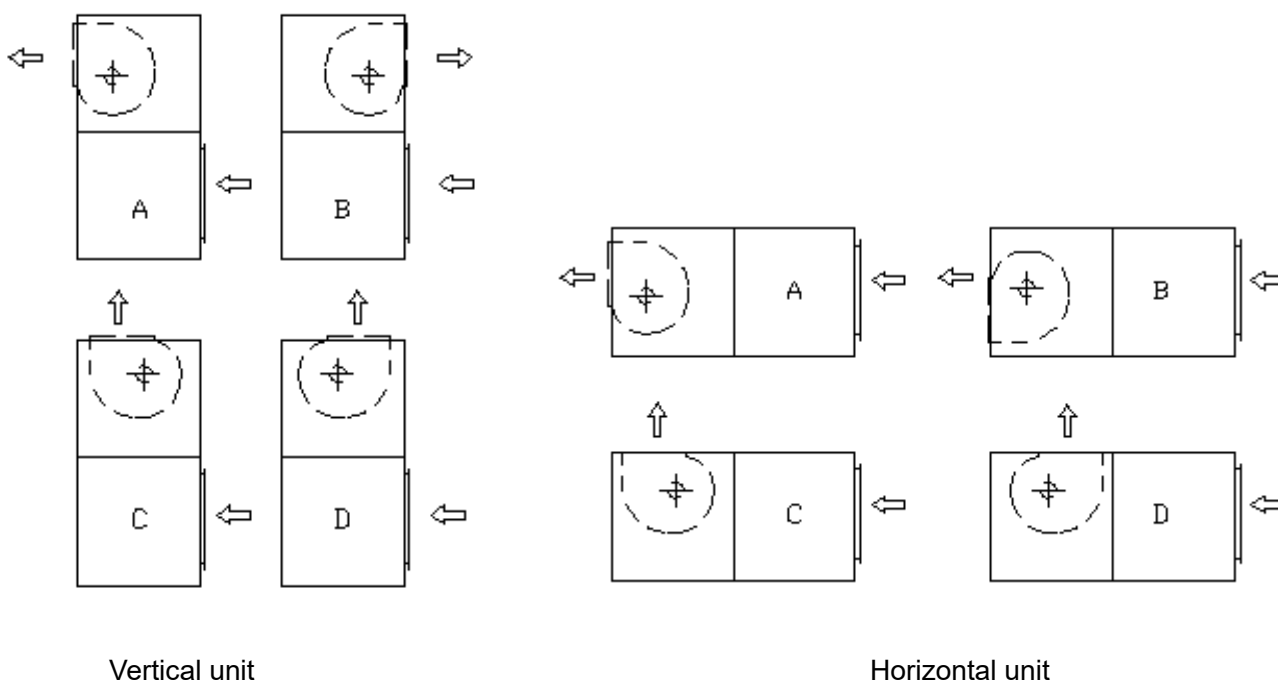
1-2 Model of Air Handling Unit

1-2-1 Nomenclature



Note: Along the airflow direction, it is the right-hand unit if coil connection pipes are on the right side of unit, vice versa.

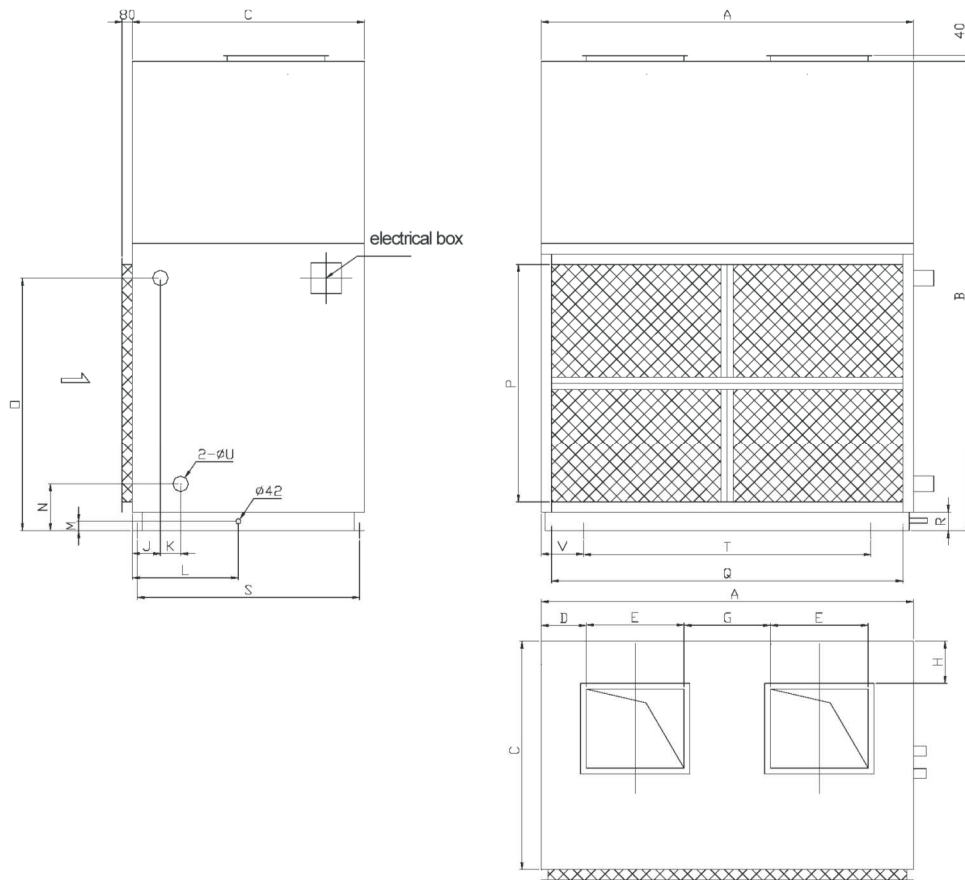
1-2-2. The types of supply air



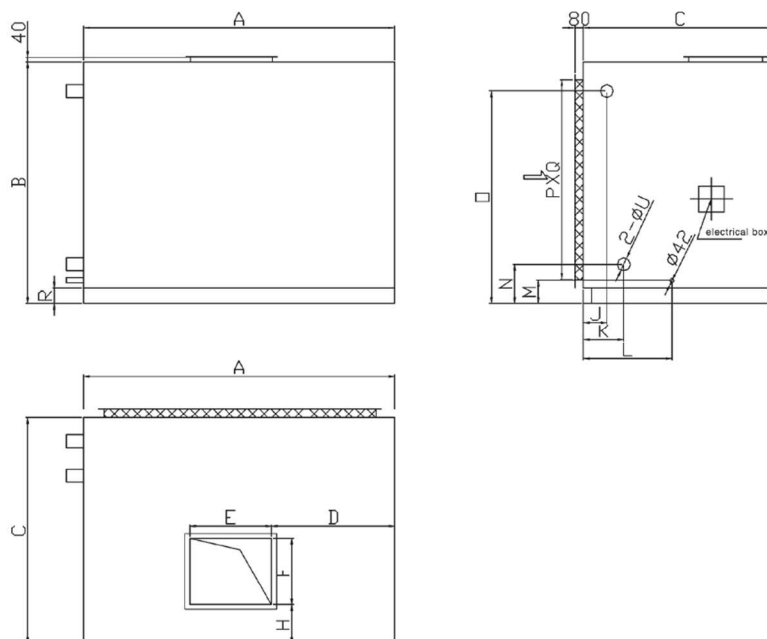
1-3 Outlines & Dimensions

1-3-1 Supply Air Method – Top-Outlet

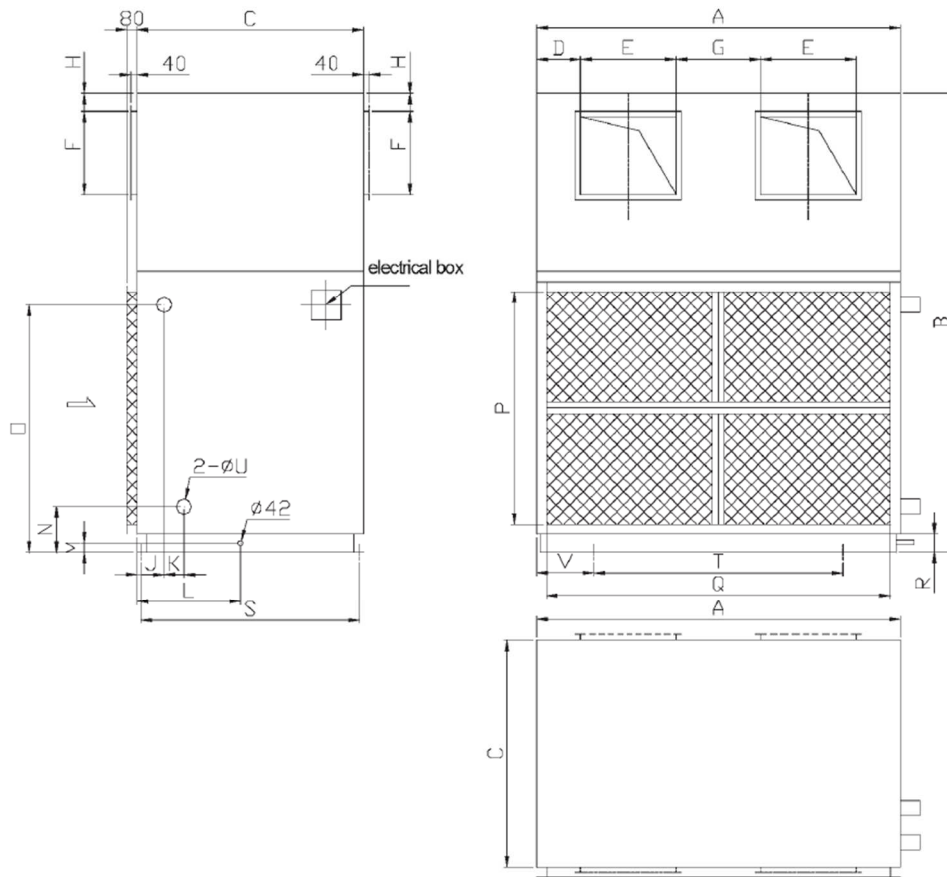
Vertical Unit



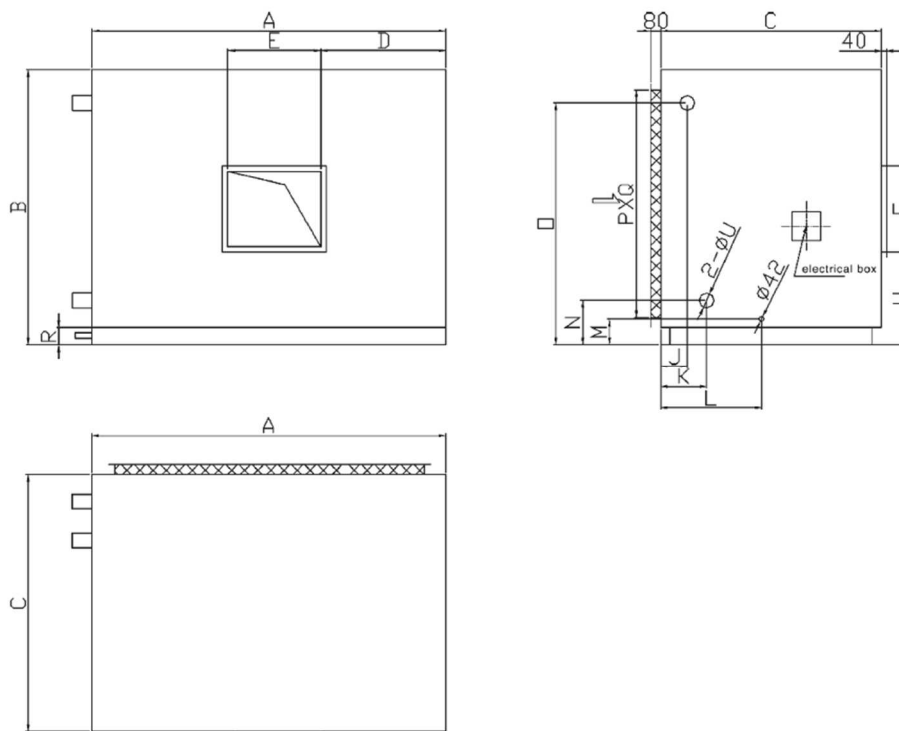
Horizontal Unit



1-3-2 Supply Air Method – Front-Outlet Vertical Unit



Horizontal Unit



1-3-3 Outlines & Dimensions

Vertical Unit (V1)

Model	Air Volume (m³/h)	Width	Height	Length	Supply Air Outlet Dimensions								Pipe Location												Return Air Inlet		Base Height	Fixture Dimension		
		A	B	C	D	E	F	G	H				J				K				L	M	N	O	P	Q	R	S	T	V
									A	B	C	D	4R		6R		4R		6R											
									type	type	type	type	Return Air	Fresh Air	Return Air	Fresh Air	Return Air	Fresh Air	Return Air	Fresh Air										
YBSE02V	2000	800	1120	620	150	232	262	-	90	90	85	85	110	110	110	110	83	83	138	138	310	33	155	500	390	648	65	580	400	200
YBSE03V	3000	960	1180	620	200	298	262	-	90	90	80	80	110	110	110	110	83	83	138	138	310	33	155	565	454	811	65	580	560	200
YBSE04V	4000	1220	1320	620	255	395	341	-	90	90	95	95	110	110	110	110	83	83	138	138	310	33	155	565	454	1071	65	580	820	200
YBSE05V	5000	1310	1380	620	255	395	341	-	70	70	95	95	125	125	125	125	83	83	138	138	310	33	160	620	515	1164	65	580	810	250
YBSE06V	6000	1310	1510	620	255	395	341	-	70	70	95	95	125	125	125	125	83	83	138	138	310	33	160	750	645	1164	65	580	810	250
YBSE07V	7000	1320	1660	700	255	471	404	-	95	95	95	95	125	125	125	125	83	83	138	138	350	33	160	815	708	1171	65	660	820	250
YBSE08V	8000	1370	1720	700	340	471	404	-	95	95	95	95	125	125	125	125	83	83	138	138	350	33	160	860	771	1221	65	660	870	250
YBSE10V	10000	1640	1850	830	500	557	478	-	95	95	95	95	125	125	125	125	112	112	138	138	415	33	160	860	780	1491	65	790	1140	250
YBSE12V	12000	1900	1850	830	600	557	478	-	90	90	95	95	125	125	125	125	112	112	138	138	415	33	175	875	780	1751	65	790	1400	250
YBSE15V	15000	2010	1850	830	250	373	404	294	160	160	100	100	125	125	125	125	112	112	138	138	415	33	175	1000	898	1861	65	790	1210	400
YBSE18V	18000	2210	1915	830	190	471	404	384	160	160	100	100	110	110	125	125	112	112	138	138	415	33	175	1065	962	2061	65	790	1410	400
YBSE20V	20000	2300	2110	830	270	430	478	343	90	90	77	77	109	109	124	124	112	112	138	138	415	33	173	1124	1025	2151	65	790	1500	400
YBSE22V	22000	2300	2240	830	270	430	478	343	90	90	77	77	109	109	124	124	112	112	138	138	415	33	173	1250	1152	2151	65	790	1500	400
YBSE25V	25000	2300	2365	830	270	430	478	343	90	90	76	76	109	109	124	124	112	112	138	138	415	33	170	1379	1279	2151	65	790	1500	400

Horizontal Unit (H1)

Model	Air Volume (m ³ /h)	Width	Height	Length	Supply Air Outlet Dimensions							Pipe Location								Return Air Inlet		Base Height
		A	B	C	D	E	F	H				J		K		L	M	N	O	P	Q	R
								A type	B type	C type	D type	4R	6R	4R	6R							
YBSE02H	2000	850	680	1120	163	232	262	345	265	99	212	131	131	214	269	320	157	250	530	476	706	60
YBSE03H	3000	950	760	1120	180	298	262	380	290	99	212	131	131	214	269	320	157	250	657	556	806	60
YBSE04H	4000	1050	870	1180	160	395	341	437	255	118	262	131	131	214	269	320	157	250	745	666	906	60
YBSE05H	5000	1100	890	1180	170	395	341	437	255	118	262	131	131	214	269	320	157	250	765	686	956	60
YBSE06H	6000	1100	1010	1180	170	395	341	437	255	118	262	131	131	214	269	320	157	250	885	806	956	60
YBSE07H	7000	1240	1010	1260	200	471	404	462	255	71.5	278.5	131	131	214	269	320	157	250	885	806	1096	60
YBSE08H	8000	1240	1140	1260	220	471	404	462	255	71.5	278.5	116	131	229	269	320	157	250	1015	936	1096	60
YBSE10H	10000	1350	1270	1390	230	557	478	518	255	52.5	364	116	131	229	269	320	157	250	1145	1066	1206	60
YBSE12H	12000	1520	1270	1390	350	557	478	518	255	52.5	364	116	131	229	269	320	157	250	1145	1066	1376	60
YBSE15H	15000	1660	1390	1470	300	568	568	503	255	87	335	116	131	229	269	320	157	250	1265	1186	1516	60
YBSE18H	18000	1770	1520	1470	400	568	568	503	255	87	335	116	131	229	269	320	157	250	1395	1316	1626	60
YBSE20H	20000	1940	1520	1560	455	638	638	525	255	86	356	116	131	229	269	320	157	250	1395	1316	1796	60
YBSE22H	22000	1940	1650	1560	455	638	638	525	255	86	356	116	131	229	269	320	157	250	1525	1446	1796	60
YBSE25H	25000	2170	1650	1670	505	714	714	560	255	87	392	116	131	229	269	320	157	250	1525	1446	2026	60
YBSE28H	28000	2220	1780	1670	520	714	714	560	255	87	392	116	131	229	269	320	157	250	1655	1576	2076	60
YBSE30H	30000	2360	1780	1800	540	800	800	601	255	90.5	432.5	116	131	229	269	320	157	250	1655	1576	2216	60
YBSE33H	33000	2570	1820	1800	691	800	800	639	298	60	404	116	131	229	269	320	197	290	1706	1576	2426	60
YBSE36H	36000	2780	1820	1800	744	800	800	639	298	60	404	116	131	229	269	320	197	290	1706	1576	2636	60

1-3-4 Connection pipe

Vertical Unit

Model	Air Volume (m3/h)	Coil Connection Pipe mm(inch)			
		U			
		4R		6R	
		Return Air	Fresh Air	Return Air	Fresh Air
YBSE02V	2000	Ø48(1-1/2")	Ø48(1-1/2")	Ø48(1-1/2")	Ø48(1-1/2")
YBSE03V	3000	Ø48(1-1/2")	Ø48(1-1/2")	Ø48(1-1/2")	Ø60(2")
YBSE04V	4000	Ø48(1-1/2")	Ø48(1-1/2")	Ø48(1-1/2")	Ø60(2")
YBSE05V	5000	Ø48(1-1/2")	Ø48(1-1/2")	Ø60(2")	Ø60(2")
YBSE06V	6000	Ø48(1-1/2")	Ø60(2")	Ø60(2")	Ø 76(2-1/2")
YBSE07V	7000	Ø60(2")	Ø60(2")	Ø60(2")	Ø76(2-1/2")
YBSE08V	8000	Ø60(2")	Ø60(2")	Ø76(2-1/2")	Ø76(2-1/2")
YBSE10V	10000	Ø60(2")	Ø76(2-1/2")	Ø76(2-1/2")	Ø76(2-1/2")
YBSE12V	12000	Ø60(2")	Ø76(2-1/2")	Ø76(2-1/2")	Ø89(3")
YBSE15V	15000	Ø76(2-1/2")	Ø89(3")	Ø89(3")	Ø89(3")
YBSE18V	18000	Ø89(3")	Ø89(3")	Ø89(3")	Ø89(3")
YBSE20V	20000	Ø89(3")	Ø89(3")	Ø89(3")	Ø89(3")
YBSE22V	22000	Ø89(3")	Ø89(3")	Ø89(3")	Ø89(3")
YBSE25V	25000	Ø76(2-1/2")	Ø76(2-1/2")	Ø76(2-1/2")	Ø89(3")

Horizontal Unit

Model	Air Volume (m3/h)	Coil Connection Pipe mm(inch)	
		U	
		Return Air	Fresh Air
YBSE02H	2000	Ø48(1-1/2")	Ø48(1-1/2")
YBSE03H	3000	Ø48(1-1/2")	Ø48(1-1/2")
YBSE04H	4000	Ø48(1-1/2")	Ø60(2")
YBSE05H	5000	Ø48(1-1/2")	Ø60(2")
YBSE06H	6000	Ø60(2")	Ø60(2")
YBSE07H	7000	Ø60(2")	Ø60(2")
YBSE08H	8000	Ø76(2-1/2")	Ø89(3")
YBSE10H	10000	Ø76(2-1/2")	Ø89(3")
YBSE12H	12000	Ø89(3")	Ø89(3")
YBSE15H	15000	Ø89(3")	Ø89(3")
YBSE18H	18000	Ø76(2-1/2")	Ø89(3")
YBSE20H	20000	Ø76(2-1/2")	Ø89(3")
YBSE22H	22000	Ø76(2-1/2")	Ø89(3")
YBSE25H	25000	Ø76(2-1/2")	Ø89(3")
YBSE28H	28000	Ø76(2-1/2")	Ø89(3")
YBSE30H	30000	Ø76(2-1/2")	Ø89(3")
YBSE33H	33000	Ø89(3")	Ø89(3")

Note: All pipe's screw is Rc/R2(GB/T7306.2-2000)

II. Installation & Transportation

2-1 Matters Needing Attention

1. In order to free drain out and well running, the air handling unit should be installed horizontally.
2. There are not any foreign matters left in the drain pan. All foreign matters should be eliminated in order to get free drain. Then it can be running.
3. During installation, please pay attention not to let plaster, paint or contamination leave on the panels, motor or fan blades. You should also be careful in preventing from damaging galvanized steel panel and insulation.

Notice: If contamination and foreign matters on motor or fan blades are not eliminated, YORK CORPORATION cannot supply effective maintenance and service.

2-2 Transportation

YBSE air handling unit is packaged by wooden case. The unit should not be damaged during transportation. The angle of inclination should not be more than 30 degree when carrying it. When the unit is delivered to destination and the wooden case is disassembled please do not uplift inlet or outlet pipe to move the unit.

The wrong way to move the unit is as shown in Figure 2.2.1

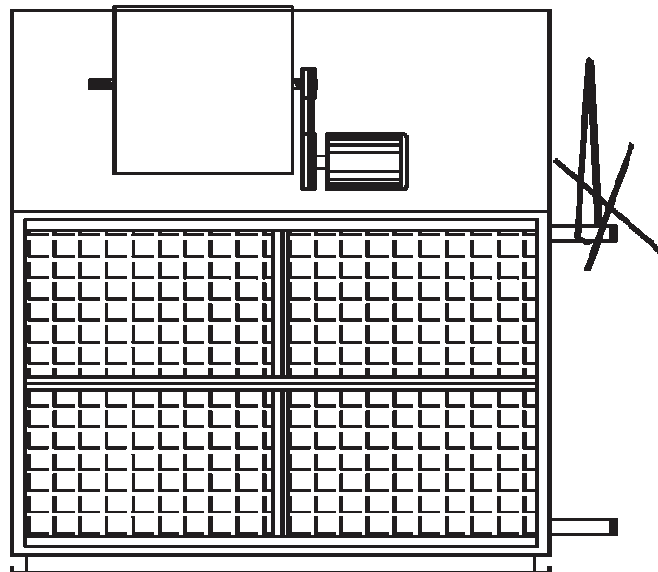


Figure 2.2.1

2-3 Preparations Before Installation

Before installation, please check the location of installation and confirm there are water supply and power supply, or air duct are ventilating. The installation location should be kept clean and tidy.

After unloading the unit, please check the unit and its components to confirm they are not damaged.

- Frame Structure of Unit
- Connection pipe
- Internal Components

2-4 Space of Installation

In order to install and maintain the unit conveniently, you should leave an appropriate space for the unit to be installed. The distance between each side of the unit and the wall is at least 300mm, and there are at least one side which the distance from it to the wall is not shorter than the unit width.

In order to install pipe and maintain/service unit conveniently, you should install the unit on a convex foundation. The size of convex foundation should be a little bigger than the bottom of the unit. The height of the foundation should meet the installation of U-trap.

2-5 Fixture

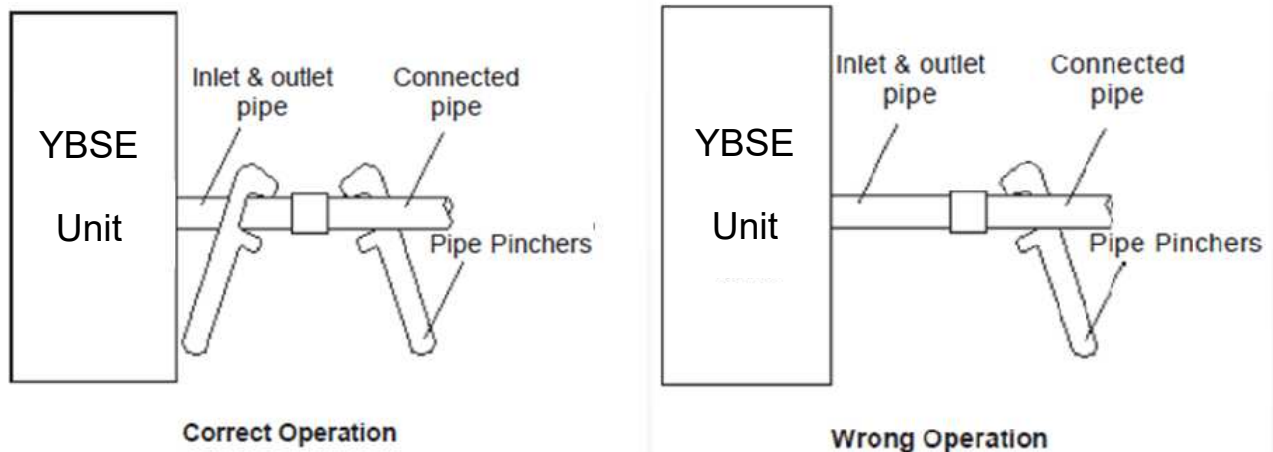
The unit should be placed horizontally and fixed on foundation by bolts.

2-6 Connection of Air Duct

Generally, YBSE air handling unit should be connected by supply air duct and return air duct (You don't need to connect return air duct if return air were connected by corridor). The arrangement and direction of supply air duct should meet the specification and standard. In order to prevent acoustic noise regeneration when vibration is transmitted to air duct, air duct should be connected with the unit by one 100~200mm length flexible duct. Such connection should be good airproof and without any air leakage. The air duct itself should not be supported on the unit. It should be supported by brace or hanger. Air duct should be equipped with good insulation to avoid condensation.

2-7 Connection of Water Pipe

Inlet/outlet pipe are connected with pipeline by screw connection. You should use two pipe pinchers (see Diagram 3). Please take carefully so as not to damage screw and cause leakage. Pay attention to the flow direction of water in pipe when connect them. Do not reverse them.



2-8 Water Quality & Required Environment

Clean and soft water quality is required. The best running temperature of air handling unit $\leq 40^{\circ}\text{C}$ and the relative humidity $\leq 95\%$.

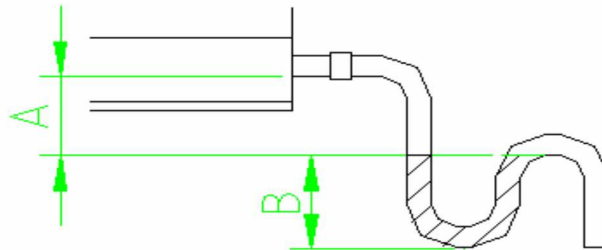
2-9 U-trap

In order to drain condensate water freely and eliminate the effect of the internal negative pressure, a U-trap (not provided by manufacturer) should be installed in drain pipe. The installation method of U-trap is followed by the following picture.

You can design its dimension as follows:

P = Absolute value of internal negative pressure Pa

$A = B \cdot P / 10 + 20$ (mm)



2-10 Warnings

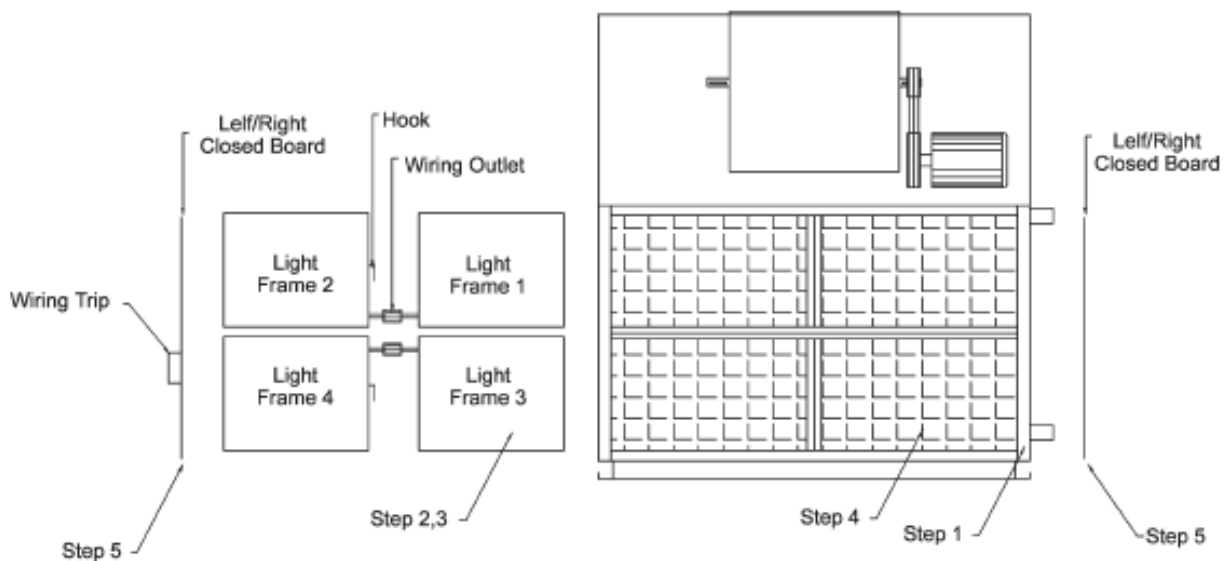
Warning marks are placed on dangerous parts of air handling unit. Please pay attention to them when transporting, installing and running it.

2-11 TiO₂ Installation

YBSE air handling unit TiO₂ sterilizer is installed in flange of return air port (Following picture). Detailed installation steps are as following:

1. Filter frame is installed on air handling unit;
2. Insert Light Frame 1 into frame by side and connect wiring outlet; Hook it and install Light Frame 2;
3. Installation Light Frame 3 and Light Frame 4 with the same way as above.
4. Insert nylon plate pre-filters into frame by side;
5. Cover the left and right closed boards; Connect wiring trip;

Ultra-violet lamp bulk components are delivered accompanying with air handling unit instead of installing non unit. So, you need to install lamp on unit before switching on power and using it. Detailed steps are shown in maintenance manual.



Attached List: Quantity of Main Components of TiO₂ Sterilizer

Sterilizer	QTY of Lamp	QTY of Aluminium Filter	QTY of Nylon Plate Prefilter	Fuse
YBSE02V	2	2	1	1
YBSE03V	4	4	2	1
YBSE04V	4	4	2	1
YBSE05V	8	4	2	1
YBSE06V	12	4	2	1
YBSE07V	12	4	2	1
YBSE08V	12	4	2	1
YBSE10V	12	6	3	1
YBSE12V	12	6	3	1
YBSE15V	18	12	6	1
YBSE18V	18	12	6	1
YBSE20V	36	12	6	1
YBSE22V	36	12	6	1
YBSE25V	36	12	6	1
YBSE02H	2	2	2	1
YBSE03H	4	4	2	1
YBSE04H	8	4	2	1
YBSE05H	8	4	2	1
YBSE06H	8	4	2	1
YBSE07H	12	4	2	1
YBSE08H	12	4	2	1
YBSE10H	12	4	2	1
YBSE12H	12	4	2	1
YBSE15H	24	12	6	1
YBSE18H	24	12	6	1
YBSE20H	36	12	6	1
YBSE22H	36	12	6	1
YBSE25H	36	12	6	1
YBSE28H	36	12	6	1
YBSE30H	36	12	6	1
YBSE33H	48	16	8	1
YBSE36H	48	16	8	1

Matters Needing Attention in Installation:

Notice: Sterilizer will be damaged if the voltage beyond the running range of sterilizer. When you install it, all switches connected with sterilizer should be in position off.

Manipulation:

The power supply of ultra-violet lamp of sterilizer is single-phase power. The voltage is AC 220V (50Hz/60Hz). Don't stare at ultra-violet lamp of sterilizer for a long time. The sterilizer can be linkage-controlled with relevant unit (the relevant wiring of linkage control is set by user). When internal fan is running, sterilizer will be running. Vice versa.

Matters Needing Attention:

The components of sterilizer have been installed in factory except the lamps need to be installed by the user. They are tested and examined strictly before ex-factory. The components are packaged in good order. So

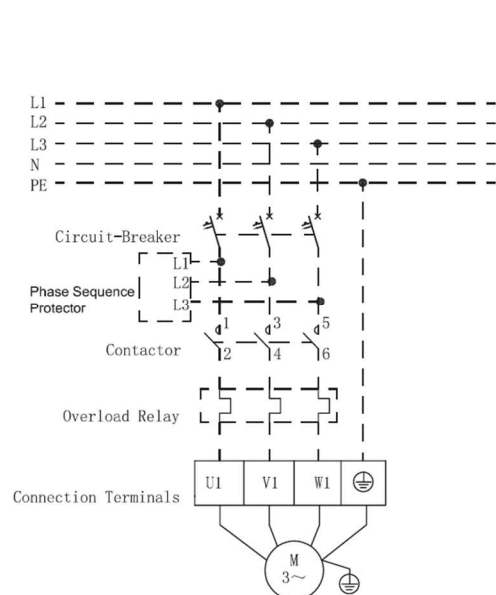
under normal condition, sterilizer should be well when it is sent to destination. When you receive sterilizer, you should check all parts. If any obvious damage occurs, you should write it on the document of carriage of carrier. Then make claim against it according to the indication of notice letter. If other parts and components are damaged except the surface, please inform serviceman in local YORK CORPORATION immediately.

YORK CORPORATION will not be responsible for the losses and damages caused in the course of transportation or after arrival consignee. Please hold this installation and operation manual properly so that you can read it again at any moment or give it to operators for reference.

III. Starting & Running

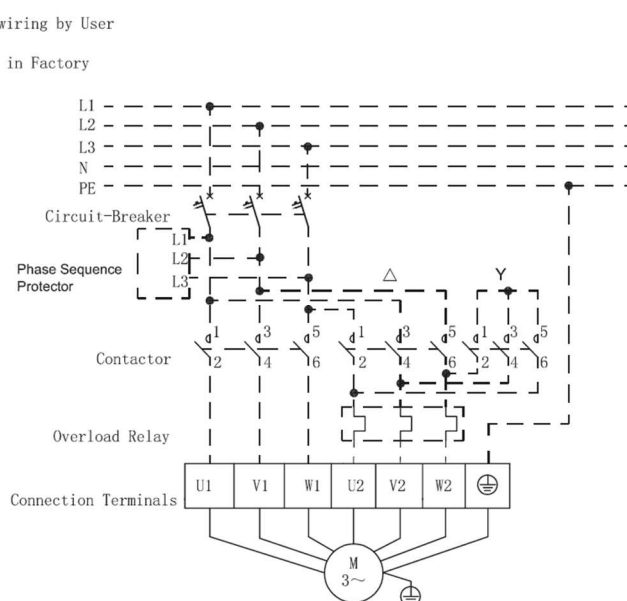
3-1 Electrical Diagram

1. Electrical wiring of dotted line users should prepare by themselves according to diagram 1 or diagram 2. There is no such configuration for standard unit.
2. All electrical wiring should comply with local electrical installation standard.
3. Ground point of unit should be connected to earth terminal of control panel.
4. Check all power supply to confirm they accord with nameplate voltage or not; and power supply should be equipped with applicable fuses.
5. Factory can offer supply power at 380V 3N~60Hz or 380V~415V 3N~50Hz.



Power of motor: Less than or equal to 5.5KW Direct

Startup Principle Diagram



Power of motor: Bigger than or equal to 7.5KW Y-Δ

Startup Principle Diagram

3-2 Check Before Startup

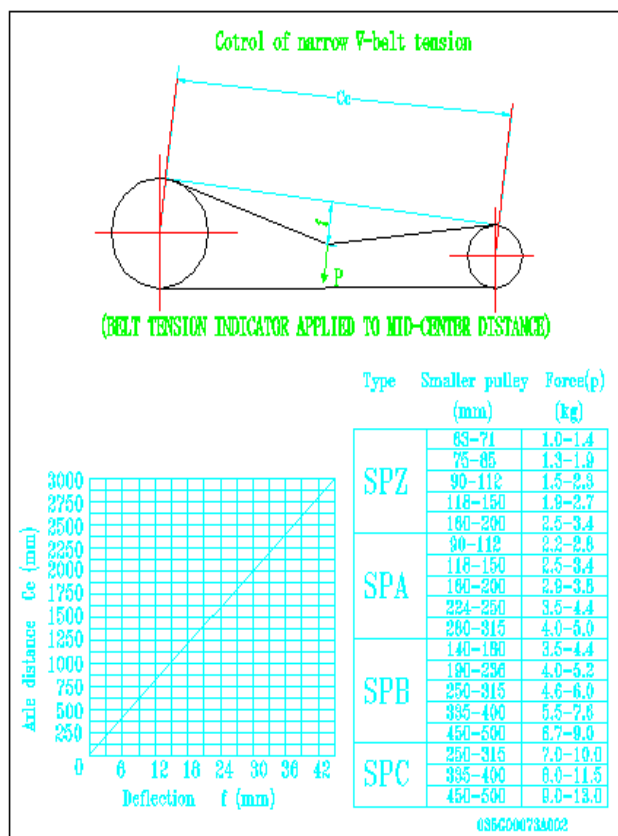
After air handling unit is installed, before starting-up and testing, please check the following items firstly:

1. Check air handling unit to find whether components are loosened or not;
2. Check earth-grounding wire to find whether it is connected well or not;
3. Before starting fan, check air duct to find whether it is ventilated or not; Damper should not be in off position;
4. Check flexible duct or duct connecting apparatus;
5. All water pipes are connected well;
6. Check power supply, including short-circuit and circuit-break protection;
7. Drain pipes have been connected correctly;
8. Filter has been installed correctly without any building fragments and dust on it;
9. Check motor and fan bearing to find whether they run freely or not;
10. Hydraulic pressure testing and ventilation testing.
11. The wooden support under the fan base is taken out or not.

Fan

1. Shut off switch before checking internal parts of fan;

2. Check fan and motor components to find whether anti-vibration and flexible connection apparatus operate freely or not;
3. Air handling unit is driven by belt and pulley. Please check tension degree of belt. The tension degree of belt is as follows (following picture);
4. Check electrical connection apparatus of motor to find whether it accords with the provided wiring diagram or not;
5. Check nameplate of motor to find whether its voltage, phase and electrical circuit accord with power on the spot or not;
6. Check the running current of motor by ammeter; Compare it with the data on nameplate of motor.



4-6 Testing

After air handling unit is installed, please pay attention to condensate water problem when starting-up air conditioning system at the first time. Condensate water is caused because surface temperature of unit is lower than dew point temperature of environment. Considering such special characteristics of this system, you can cool water temperature slowly so as to avoid moist air entering air conditioning room, and then avoid the production of condensate water in colder parts of unit. Use automatic flow switch to avoid the production of condensate water. If the system isn't installed automatic flow switch and thermostat, fan runs unstably, or inlet/outlet pipe valve of coil is not tight when it doesn't work, you should startup air handling unit carefully so as to avoid the production of condensate water.

Fan

Put on the switch, the fan will be driven. It should run continuously. Switch off fan and it would stop running in time. Pay attention to the rotating direction of fan when it runs.

4-6Running

Fan

Put on the switch of the fan to control its running. The fan would run continuously. When you shut off fan, it will stop running in time.

Exhaust the Air in the cooling coil

There is a discharge valve on the outlet pipe of coil. When coil is watered at the second time, there will be some air collecting in coil. The part air will be collected in the tiptop of coil under the function of water in generally. If there is bubble in coil, there is air in it. So, you need to open the discharge valve to exhaust air so as to guarantee the heat exchange efficiency. After air is exhausted, you should close the discharge valve to avoid chilled water leakage. If you do not follow above-mentioned safety regulation to operate, manufacturer will not be responsible for any accident caused by that.

IV. Maintenance & Service

Notice: Air conditioning unit should be maintained by professional workers. The professional workers should do daily monitoring and periodical maintenance for the unit. Strict position guide system and operating instructions should be established. Pay attention to regularly maintenance, service, check and repair.

4-1 Filter

Air handling unit adopts plate filter that can be cleaned. Please inspect the air pressure drop of filter in its running carefully. Generally, when the resistance of the filter is twice of the original one, you should replace or clean the filter. You can pat plate type filter to wipe off dust and wash it in warm water by neutral abstergent if necessary. Re-install it in original position after filter is dry.

4-2 Fan & Electric Motors

All the belt drive fans use the bearing no grease nipple and should be inspected the fan before it starts, please contact our serviceman if anything is abnormal.

Turn the wheel of the fan to check the abnormal noise, for example: regular friction noise, shrill noise etc.

Observe the spillage lubricating grease from bearing and if the color turn to black or not.

1. If need, clean the bearing and replace the obsolete lubricating grease. Must inspect the fan status if it has not been operating over one month.
2. Lubricating grease replacement steps: firstly, remove the bearing cap and wash the bearing by gasoline, after it's dry, fill in lubricating grease. The lubricating types is ALVANIA RL2 or GOLD GREASE No.3, fill in full lubricating grease.
3. Please replace the bearing if it is damaged or rust. When installation, should tap the operation.
4. For motors, to fill in the lubricating grease according to table below after running for couple minutes.

To fill in the lubricating grease according to table below for motor:

Motor Brand		WoLong		HeBei		HuaLi		ABB		Siemens	
ITEM	Motor Frame Size	With oil filler hole or not	Service life (hours)/Oil filling cycle (hours)	With oil filler hole or not	Service life (hours)/Oil filling cycle (hours)	With oil filler hole or not	Service life (hours)/Oil filling cycle (hours)	With oil filler hole or not	Service life (hours)/Oil filling cycle (hours)	With oil filler hole or not	Service life (hours)/Oil filling cycle (hours)
1	80	No	10 years	No	20000	No	15000	No	20000	No	20000
2	90	No	10 years	No	20000	No	15000	No	20000	No	20000
3	100	No	10 years	No	20000	No	15000	No	20000	No	20000
4	112	No	10 years	No	20000	No	15000	No	20000	No	20000
5	132	No	10 years	No	20000	No	15000	No	20000	No	20000
6	160	Yes	7000	No	20000	Yes	5000	No	20000	No	20000
7	180	Yes	7000	Yes	2000	Yes	5000	No	20000	No	20000
8	200	Yes	6500	Yes	2000	Yes	5000	No	20000	No	20000
9	225	Yes	6500	Yes	2000	Yes	5000	No	20000	No	20000
10	250	Yes	6000	Yes	2000	Yes	5000	Yes	6500	No	20000
11	280	Yes	6000	Yes	2000	Yes	5000	Yes	6500	No	20000
12	315	Yes	5500	Yes	2000	Yes	5000	Yes	6500	Yes	3000

4-3 Belt

When you find belt be too loose or too tight, which affects transmission, you should adjust the tension of the belt. The adjustment method is as the picture the front shows.

4-4 Coil

The coil can be cleaned by vacuum cleaner first and then scrub it by hard nylon brush. If there is compressed air source, you can use hose with sprayer to blow and wash it under high pressure. Additionally, if you use applicable air filter and maintain it correctly, you can prolong clean time of coil.

4-5 Drain Pipe

Before air handling unit runs, you should check the drain pipe. If drain pipe is clogged, you should open it or replace it to drain condensate water out.

4-6 TiO₂

Maintenance

Nylon plate pre-filter and aluminum filter with TiO₂ should be cleaned periodically. You should clean the nylon plate pre-filter once a month and clean aluminum filter once three months.

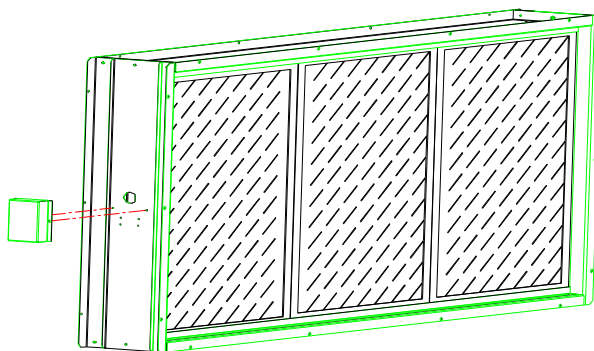
TiO₂ coating on aluminum filter cannot be cleaned by water. If there is any dust on aluminum filter, please blow it by dry air.

When checking and repairing TiO₂ sterilizer components, you can refer to the following detailed steps:

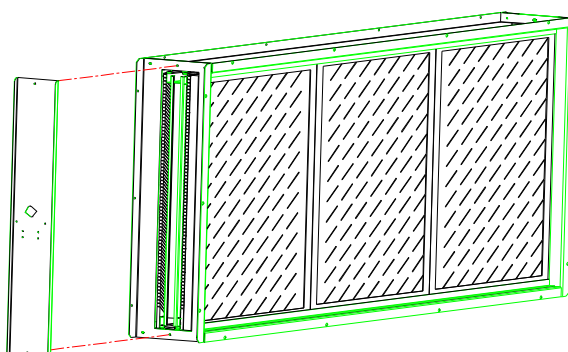
If you want to re-install frames, please do the following detailed steps in reverse.

Manipulation Schematic Diagram:

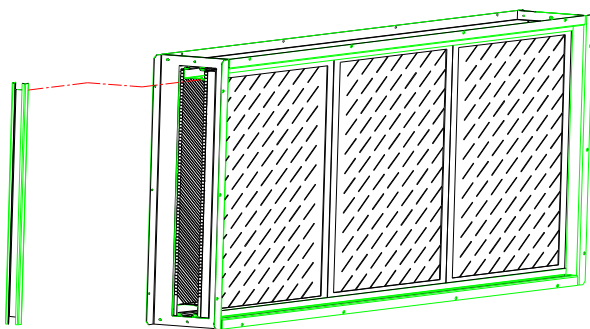
- I. Shut off power supply and disassemble electrical box.



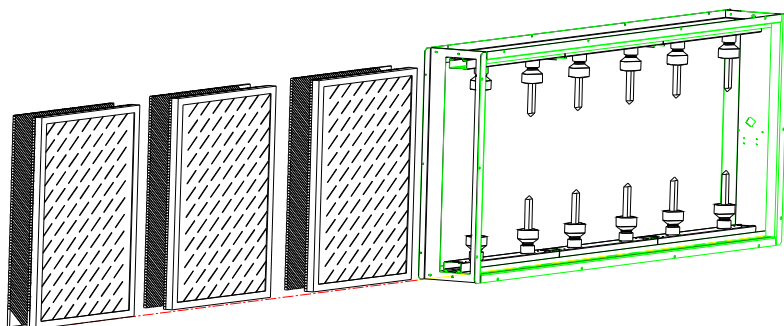
- II. Disassemble the left or right access boards.



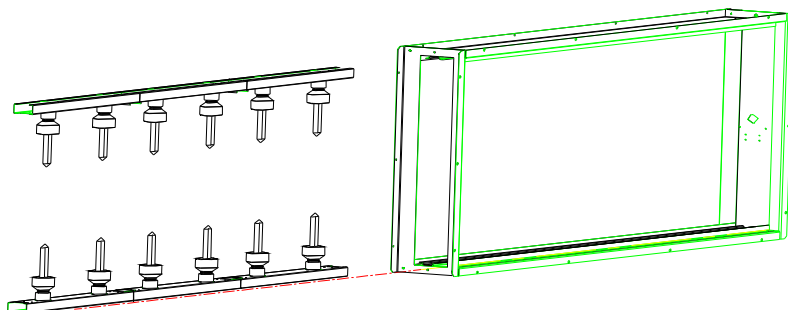
III. Take out the side bracket.



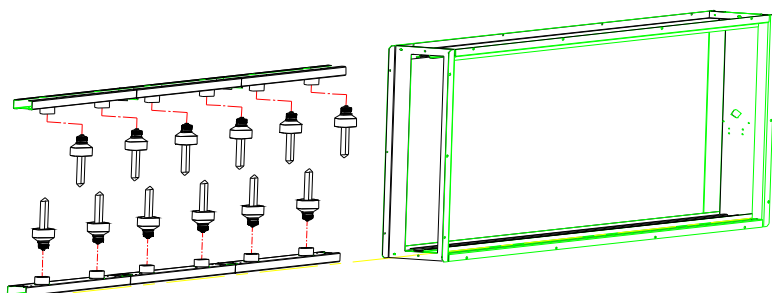
IV. Dismount nylon plate prefilter and Aluminium filter.



V. Draw out TiO₂ lamp frame.



VI. Dismount and install sterilization lamps.



4-7 Others

If the air handling unit is installed or placed outdoor, you should take necessary measures to prevent the unit from being affected with damp, rusted and dusted. Drain out all collected water in coil in order to prevent coil from being frozen and damaged when unit stops running in winter.

V. Troubleshooting

1. Lower Air flow

When the actual external air pressure drop is bigger than the design pressure, the air flow will come down. Belt is loosened so rotating speed of fan reduces, which makes air flow become lower.

2. Higher Air Flow

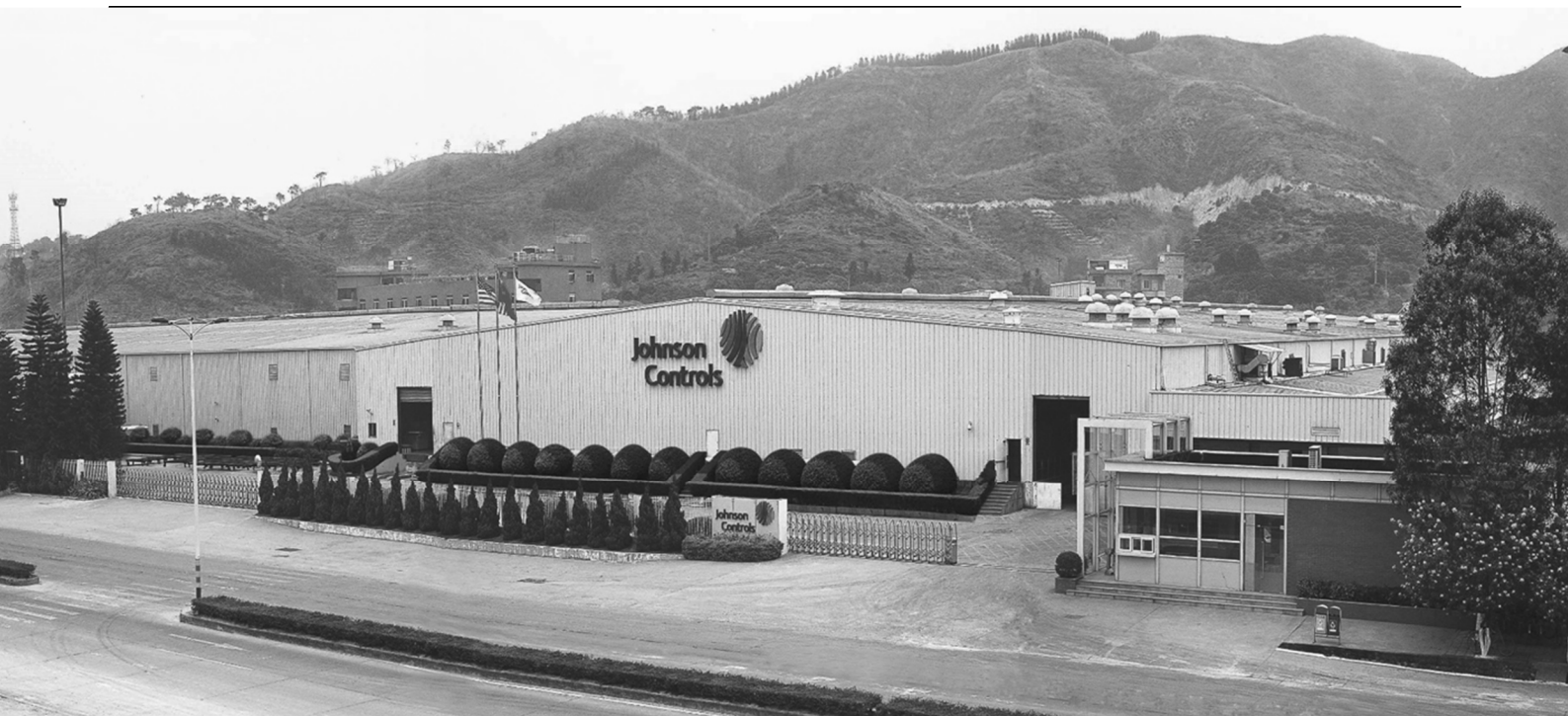
When the actual external pressure is lower than the design pressure, which makes air flow become higher. The higher air flow is, the faster air speed is, and then the noisier the unit is.

3. Noise

Check return air and supply air duct to find whether they are connected with unit by flexible connection or not; Whether anti-vibration is installed ; Whether air speed in blowing air opening is too big or not; Whether the parts and components are loosened or not.

4. Broken Belt

Check belt tension to find whether it is too tight or not; Whether pulleys are not aligned; Whether the belt is worn out.



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