



**Fume Hood
FH(PD) Series
User Manual**

KYNTEL

Version 2023

Preface

Thanks for choosing KYNTEL FH(PD) Series Fume Hood!

Sincerely hope that our product can bring you best help.

In order to make you understand more clearly about our Fume Hood, please read this manual carefully before you start to use it. It is very important for you to use our instrument correctly and safely.

After reading this manual, please place this manual in a convenient place for reference at any time.

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1. Product Introduction

The ductless PP fume hood is mainly aimed at various harmful and odorous gases, odors, moisture and corrosive substances produced during experimental operations, and with the excellent acid and alkali resistance of PP material, it can be used for higher intensity acid and alkali experiments. Widely used in chemical, scientific research, pharmaceutical factories, third-party testing institutions, schools, hospitals and other laboratory places.

Note: This type of fume hood cannot be used for experiments with large amounts of volatile chemicals, experiments with large amounts of smoke, and experiments with flammable, explosive and highly toxic substances.

Working environment:

Just for indoor use;

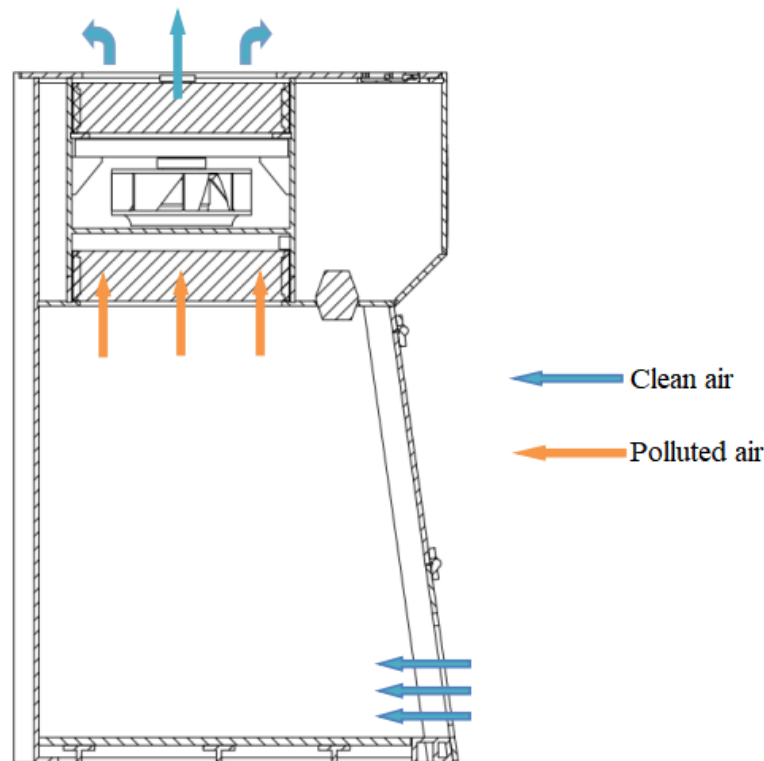
Ambient temperature: 15°C ~ 35°C;

Relative humidity: $\leq 75\%$;

Power supply: The same as the rated voltage and rated frequency of the cabinet, see the table of technical parameters and performance indicators;

The power supply needs to be reliably grounded.

2. Working Principle / Airflow Mode Protection Area Diagram



3. Technical Parameters

Model Technical parameters	FH700(PD)	FH1000(PD)
Dimensions (L×D×H)	700*700*1100 (mm)	1000*700*1100 (mm)
Working area size (L×D×H)	680*606*688 (mm)	980*606*688 (mm)
Rated voltage	AC 220V	AC 220V
Rated frequency	50/60 Hz	50/60 Hz
Rated power	700W	700W
Suction port speed	0.3m/s~0.8m/s	0.3m/s~0.8m/s
Waterproof and explosion-proof fluorescent lamp power	15W	15W
Noise	≤65dB (A)	≤65dB (A)
Filter specification	600*346*80 (mm) *2	700*346*80 (mm) *2

Note: The company reserves the right to change the design of the product, and any design changes will be made without prior notice.

4. Performance Indicators

4.1 Vibration amplitude:

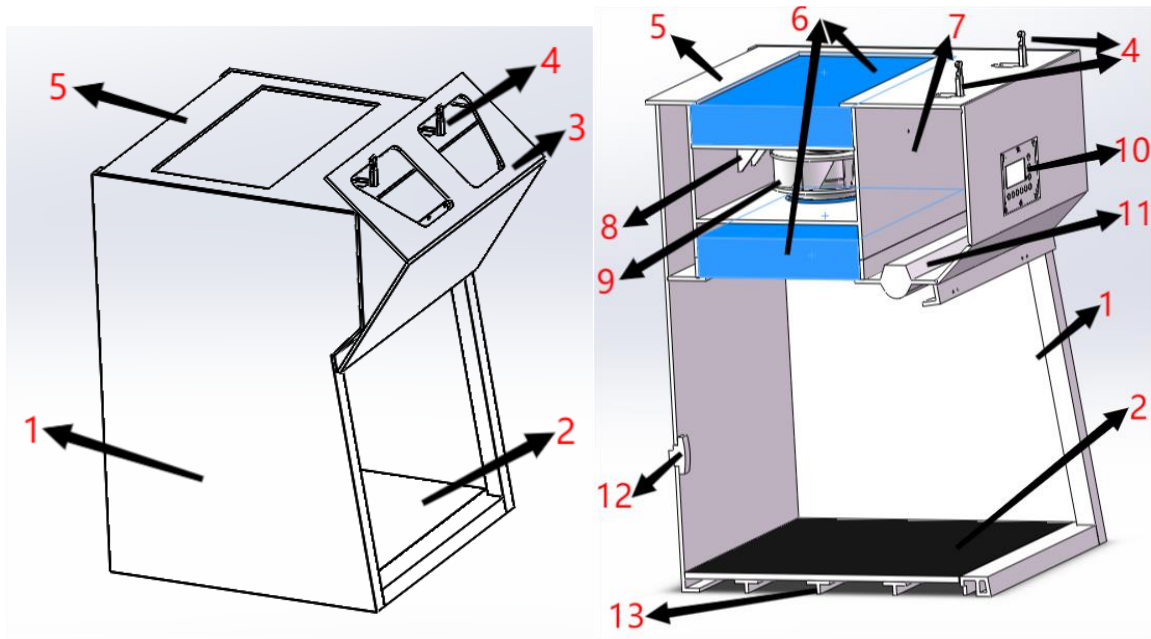
Net amplitude of vibration between frequency 10Hz and 10kHz ≤ 5 m (rms)

4.2 Pressure resistance:

When the voltage value rises to 1390V AC voltage within 5s, it will not break down for 5 seconds;

4.3 Grounding resistance: ≤0.1Ω;

5. Structural Composition



(1) cabinet body, (2) physical and chemical board operation table, (3) acrylic window, (4) hidden hook, (5) top cover, (6) filter, (7) fan box, (8) Fan bracket, (9) Fan, (10) Operation panel, (11) Tri-proof light, (12) Splash-proof socket, (13) Physical and chemical board support

5.1 Acrylic window

The front window of the fume hood is a foldable acrylic window with a physiological slope of 8° , which is ergonomically designed, has a larger viewing angle, and has an operation port, which is more convenient for the operator to use. At the same time, the lower window has the function of stopping at will.

5.2 Hidden hooks

The top of the cabinet adopts a hidden PP hook, lift up the window and hang the operation port on the hook, which is convenient for taking and placing test objects or instruments in the operation area.

5.3 Double filter system

Filtration system is the most important system to ensure the performance of this equipment. It consists of a fan, upper and lower filters. The main function of the filtration system is to absorb various harmful and odorous gases, odors, moisture and corrosive substances generated during experimental operations, to protect the safety of users and prevent the spread of pollutants in the experiment to the laboratory.

5.4 Lighting source

Optional 15W LED tri-proof light, no dead angle lighting, waterproof, dustproof, explosion-proof, no flicker, eye protection is safer.

5.5 Splash-proof socket

A splash-proof socket is set at the rear of the operating area, which can supply power to the equipment in the operating area, which is convenient for the use of experimental instruments.

5.6 Control Panel




The display shows: After turning on the power, the displayed content from top to bottom is: ■■■■■■■■ FAN, indicating the working wind speed of the fan; The time is displayed on the right; UV TIME is the working time of the UV lamp of this equipment; WORK TIME is the working time of the filter of this equipment.


Buttons :


1. Fan key, 2. Lighting key, 3. UV light key, 4. Power key, 5. Socket key, 8. Air volume decrease key, 9. Air volume increase key, and keys 6 and 7 are background debugging keys.

Touch button function:

The operation of the device is carried out by lightly touching the buttons.


(1) The " " key is the power key: it controls the main switch of other function keys. Each time you press the button, the buzzer will sound once; at the same time, the status of the LCD display will change once, that is, from dark to bright, or from bright to dark. The system also switches between standby mode and working mode.


(2) The " " key is the fan key: it is the control key for the working state of the fan. Each time it is pressed, the working status and the indication status of the fan indicator light on the control panel will change once. Fan memory function, that is, the fan will display the fan gear at the last shutdown when it is turned on next time, which avoids the trouble of having to adjust the fan gear every time it is turned on.


(3) The " " key is the lighting key: it is the control key of the LED tri-proof light. Each time the button is pressed, the state of the LED light tube and the indication state of the lighting indicator on the control panel change once, that is, from on to off, or from off to on.




(4) The " " key is the UV key: it is the control key of the UV lamp. Every time you press it, the




state of the ultraviolet lamp and the indication state of the ultraviolet indicator light on the control panel will change once, from on to off, or from off to on.






(5) The "" key is the socket key; every time you press it, the buzzer will sound once; the socket status on the display screen will change once, that is, from nothing to existence, or from existence to non-existence; At the same time, the socket will also change between power and no power;

(6) The "" button is the fan speed down button; when the fan is running, if the number of "■" is greater than 1, each time you press it, you can lower the fan speed by one gear, and the buzzer will sound once until 1 "■" appears. When the UV lamp is turned on, press this button to decrease the timing time of the UV lamp, the minimum time is 10 minutes, and the set time can be memorized.

(7) The "" key is the key to increase the wind speed of the fan; When the fan is running, if the number of "■" is less than 8, each time you press it, you can increase the fan speed by one gear, and the buzzer will sound once until "■■■■■■■■" appears. When the UV lamp is turned on, press this button to increase the timing time of the UV lamp, the maximum time is 90 minutes, and the set time can be memorized.

(8) Clock adjustment: In the standby state, keep pressing the lighting button No. 2  to give an alarm to enter the clock setting state. At this time, the hour digit starts to flash. Adjust the clock size by pressing the fan speed up and down buttons  No. 8 and 9. Then press the fan button, then the minute digit starts to flash, adjust the minute digit by pressing the number 8 and 9 fan speed up and down buttons , and when the minute and hour digits are adjusted to the current time, press the lighting button again and continue to give an alarm to save the clock.

(9) Adjustment of UV lamp timing time: Turn on the UV lamp button  to turn on the UV lamp, and adjust the timing time of the UV lamp through the wind speed up button  or the wind speed down button , which can be adjusted within 0-90min.

(10) UV fan appointment timing switch: In standby mode, long press the serial number 7 button  to enter the timing interface. In the timing interface, press the fan button  to shift the operation (at this time, the digit to be set enters the blinking state); press the number 8 and 9 fan speed up and down buttons  to operate the set time. Press the socket button  to switch between UV and fan timing. In the state of scheduled timing, long press the No. 2 lighting key  to reset to zero to cancel the timing function.

5.7 Fuse

This equipment is equipped with a main power fuse, which is located next to the outlet of the power

line at the back of the cabinet. The fuse label corresponds to the corresponding specification and model, see 9.2.

6. Installation and Operation Instructions

6.1 Installation

- a. Remove all packaging components;
- b. Check whether there are scratches, deformation or foreign objects on the outer surface of the cabinet;
- c. Carefully check the attachments and materials against the packing list in the instruction manual;
- d. Place the whole device on the tabletop of the test bench, and at least 50mm of space must be reserved on the rear side of the fume hood to insert the power cord;

6.2 Instructions for use

- a. Plug in the power cord and turn on the power;
- b. Pull up the two hidden hooks on the top, lift up the acrylic window, hang the window operation port on the hook, put the test object or instrument into the operating table, and put down the window;
- c. Press the relevant function key (please refer to the instructions in 5.6 for relevant keys, functions and operations);
- d. After use, take out the experimental products or instruments, etc., and then turn off the equipment.



- (1) When the hidden hook is pulled up or pressed down, it must be pulled forward slightly;
- (2) The power of the equipment used on the socket does not exceed 500W (rated voltage*rated current 220V*2.3A)
- (3) A splash-proof socket is only waterproof when its front cover is down.

7. Maintenance and Common Failure Analysis

Since the statistics of operating time will directly affect the judgment of maintenance needs, we suggest that a detailed record of operating time should be prepared for reference and inquiry when using this equipment!

7.1 Surface cleaning

7.1.1 Surface cleaning of the operating table

Wipe the entire surface with a soft cotton cloth soaked in a concentrated soap solution, then use another cotton cloth or towel soaked in clean warm water to remove the suds, then dry quickly with a dry cloth or towel.

7.1.2 Cabinet surface and glass door cleaning

Clean the surface of the cabinet and the acrylic window with a soft cleaner or a special cleaner for acrylic, and then wipe it with a soft cotton cloth or towel.



Before maintenance, the power should be cut off;

Do not spray any chemical reagents on the operation panel or other labels to prevent discoloration of the label film or illegible writing.

7.2 Period of comprehensive maintenance

The recommended period for comprehensive maintenance is one year or 1000 working hours.

7.3 Maintenance method

7.3.1 Daily or weekly maintenance

- a. Clean the operating table (refer to the instructions in 7.1.1);
- b. Clean the cabinet surface and acrylic window around the operating area (refer to the instructions in 7.1.2);
- c. Check whether the various functions of the equipment are abnormal;
- d. Record this maintenance;

7.3.2 Monthly maintenance

- a. Check the firmness of the front acrylic window hinge;
- b. Clean the operating table ((refer to the instructions in 7.1.1);
- c. Clean the surface of the cabinet, the surface of the inner wall of the operating area, and the inside and outside of the acrylic window (refer to the instructions in 7.1.2);
- d. Check whether the various functions of the equipment are abnormal;
- e. Record this maintenance.

7.3.3 Annual maintenance

- a. Check the firmness of the front acrylic window hinge.
- b. Check the ultraviolet lamp and fluorescent lamp.
- c. Apply for an inspection of the overall performance of the fume hood every year to ensure the safety of the fume hood, and the inspection fee shall be borne by the user.
- d. Record this maintenance.

7.4 Common fault analysis

Before diagnosing the fault, please confirm whether the power supply is connected well, whether the power cord is obviously damaged, whether the fuse is in good condition, and whether the switch is on.

Fault	Checking parts	Methods
LED lights are off or abnormal	Light tube	Replace lamp
	Wire line	Checking wire line
	Control board	Replace control board
The UV light is off or abnormal	Chain	Confirm whether the fan and lighting are turned off
	Lamp holder	Check that the lamp tube is firmly connected to the lamp holder
	Light tube	Replace light tube
	Ballast	Replace ballast
	Wire line	Checking wire line
	Control board	Replace control board
Key not working	Control board	Make sure the power is connected and the fuse is in good condition
		Make sure the keys are not damaged
		Make sure the connecting wire is not in bad contact
		Replace control board
Device not powered	Power supply	Power is not connected well
	Power cord	Is the power cord visibly damaged?
	Fuse	Is the fuse in good condition?
	Transformer	Whether the transformer output is normal
	Control board	Replace control board
Display is off	Connection cable	Check whether the connection cable is in good contact
	Display screen	Check if the display is good
	Control board	Replace control board



- (1) The operation of the above electrical components must be carried out by a qualified electrician under safe conditions (cut off the power supply). All other parts are not allowed to be disassembled, otherwise the consequences shall be borne by the user;
- (2) When the equipment does not have the above failures and the operator cannot eliminate them immediately, please notify our company's maintenance department immediately. For your safety, please do not repair the equipment by yourself;
- (3) The maintenance work of this equipment can only be undertaken by trained and approved

technical personnel;

(4) If you need to order parts, you can find our technical service department, please indicate the model and serial number of the medical clean bench you purchased.

7.5 Replacement of parts:

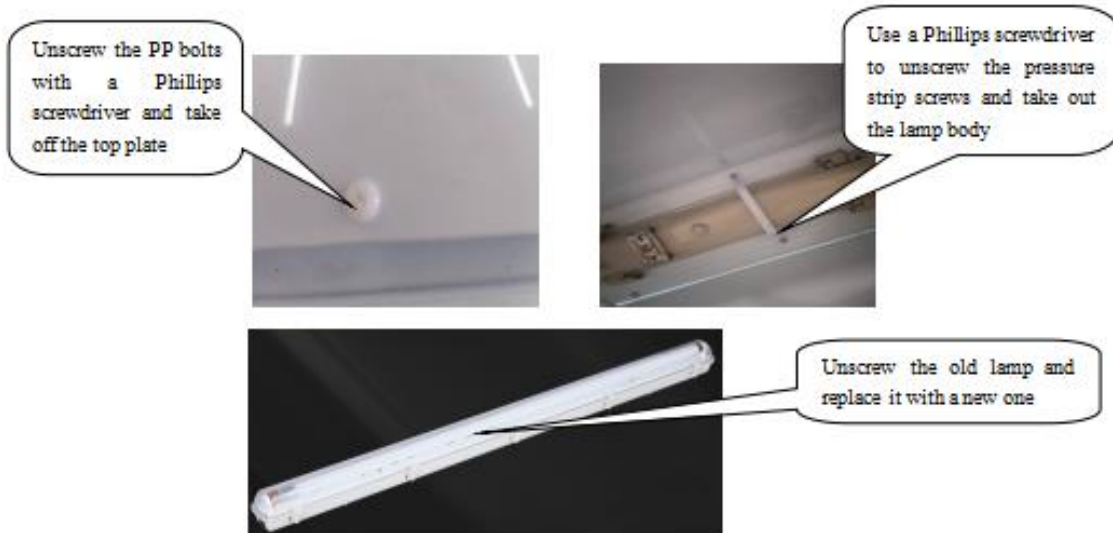
1) Replace the fuse

The fuse (10A) is located on the power supply tail plug on the rear side of the cabinet. Use a flat-head screwdriver to lift out the fuse holder and replace it with a new one, then press it back.



2) Replace the lighting lamp

When the tri-proof lamp needs to be replaced, please disconnect the power supply. Then unscrew the top plate bolts to take off the top plate, unscrew the fixing screws of the three-proof lamp pressure strip and remove the pressure strip to take out the lamp body. Take down the old tri-proof light tube, replace it with a new one, and then install the lamp body, bead, and top plate in order.



(1) It is forbidden to wipe the lamp body with a damp cloth when cleaning under the power-on state;

(2) It is forbidden to replace in the energized state;

7.6 Storage conditions

The fume hood is stored in a warehouse with a relative humidity of no more than 75%, a temperature lower than 40°C, good ventilation, and no corrosive gases such as acid and alkali. The storage period should not exceed one year. Fume hoods that are more than one year old should be unpacked for inspection, and fume hoods that pass the unpacking inspection can enter the circulation field.

7.7 Replacement Parts List

No.	Name	Specifications
01	Fuse	10A
02	LED lamp tube	220V 15W*1
03	Fan	Fanstar SC225E2-AGT-05 fan *1 piece
04	Main control board	(LCD) (STC chip) control board
05	Filter	600*346*80mm*2/700*346*80mm*2pieces

8. Notes

(1) Before connecting the AC power supply, ensure that the voltage of the power supply is consistent with the input voltage of the fume hood and the voltage is stable, and ensure that the rated load of the power socket is not less than this requirement; This fume hood uses a grounding plug, which has a third pin and can only be used with a grounding type power socket, which is a safety device. If the plug cannot be inserted into the socket, please ask an electrician to install a grounded power socket, and make sure that the grounding is good when using it;

(2) During the use of the equipment, do not put soft and fine objects (such as soft paper towels) on the table, so as not to be sucked into the filter mesh or adsorbed on the filter, which will affect the operation of the equipment;

(3) Prohibition of open flames: open flames are prohibited in the fume hood!

(4) The filter has its service life. With the extension of the service life, the accumulation of dust and bacteria in the filter will lead to an increase in the pressure loss of the high-efficiency filter. When the wind speed is too high to meet the requirements, you must contact our service department in time to replace the filter, otherwise it will affect the safety performance of the equipment.



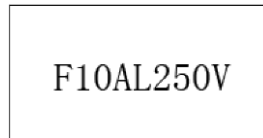
Solemnly declare: If the equipment is not used according to the method specified by the company, the protection provided by the equipment may be damaged, and the company will not be responsible for the risks caused by the operation not in accordance with the regulations!

9. Label Description

(1) Company label



(2) Fuse label



(3) Ground label

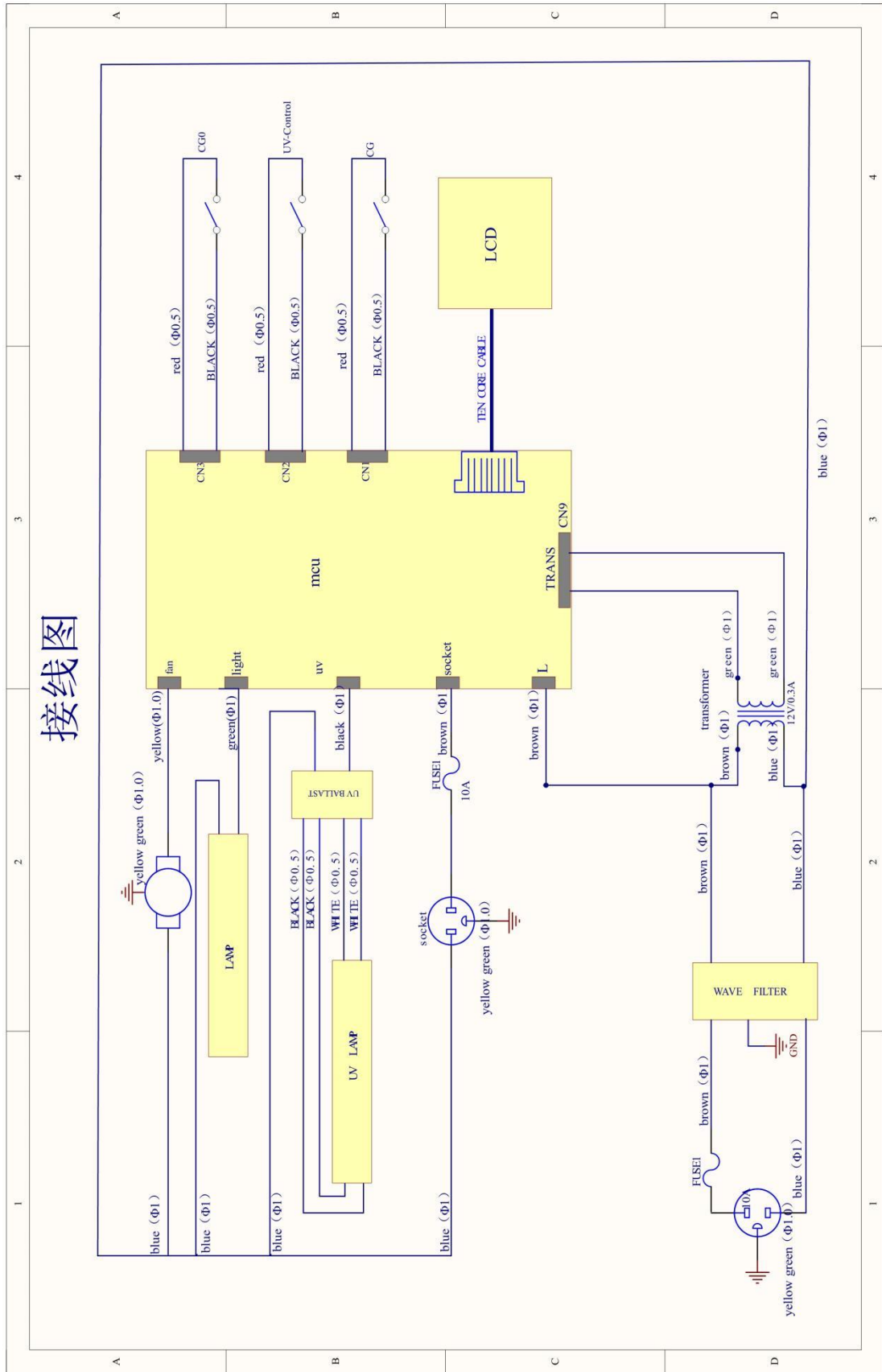


10. Warranty

- 1) Warranty is 12 months from EX-factory date (excluding consumable accessories: Lamp tube and fuse).
- 2) KYNTEL would not be liable for any repair of damage caused by improper operation.
- 3) If the warranty has been expired, KYNTEL would still responsible for repair with relative charges.
- 4) Life time of laminar flow cabinet is 8 years from production date on the label.
- 5) KYNTEL would provide equipment drawings and necessary technical data for maintenance companies or personnel trained by KYNTEL engineers.

Warranty declaration: One-year Warranty, Life-long Maintenance

Appendix A Circuit Diagram



Appendix B Packing List

Name	Qty
Main unit	1
RVV power cord	1
Fuse (10A)	1
User manual	1
Testing report	1
Certificate	1
Warranty	1