

Negative Pressure Quarantine Cabin (ARK-S2000)

Installation & Operation Manual

Super bactericidal effect
Safe and reliable
Fast isolation
Remote intelligent control

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Summary

Product Overview

The unit is composed of cabin body, air inlet system, negative pressure disinfection, purification and exhaust system, odor removal system, noise reduction system, lighting system, interlocking electric delivery window, ultraviolet disinfection vehicle, intercom system, one button alarm, TV entertainment system, UPS uninterruptible power supply, pressure gauge and intelligent control system. It can quickly and safely isolate the suspected patients with a fever and effectively prevent the spread of the virus. Users can add beds, water-free toilets, oxygen supply interfaces, infusion racks, fire extinguishers and other facilities according to their own demands.

Application Range

The unit is suitable for ports, airports, railway stations, hospitals, shopping malls, hotels, museums, schools, subway stations, convention centers, residence community, office buildings, etc.

Advantages

Mobile and convenient; Fast on-site isolation

More frequent air changes; Good disinfection effect

Passed the EU CE certification

Passed FCC certification of Federal Communications Commission (USA)

Main Functions

1. Air inlet system

It is composed of air inlet and reflux valve.

2. Negative pressure disinfection, purification and exhaust system

It is composed of disinfection module, purification module and exhaust system. The air in the unit is discharged after disinfection and purification.

3. Odor removal system

It is composed of odor removal disinfection module, which can remove the slight smell produced in the process of disinfection and purification.

4. Noise reduction system

It is composed of noise reduction module to reduce the noise caused by the exhaust system.

5. Lighting system

Adopted with multi-scenario lighting mode, including main power supply for lighting, auxiliary power supply for lighting and night lighting.

6. Interlocking electric delivery window

Adopted with stainless interlocking electric delivery window with function of ultraviolet disinfection function for the transfer and disinfection of materials inside and outside the cabin.

7. Ultraviolet disinfection vehicle

Adopted with movable UVC lamp for disinfection (which must be operating when the cabin is empty)

8. Intercom system

It is used for communications of people inside the cabin with people outside the cabin.

9. TV Entertainment System

LCD TV is used for entertainment in the cabin.

UPS uninterruptible power supply

UPS uninterruptible power supply is configured inside the cabin, whose power supply time is equal or more than 3 hours.

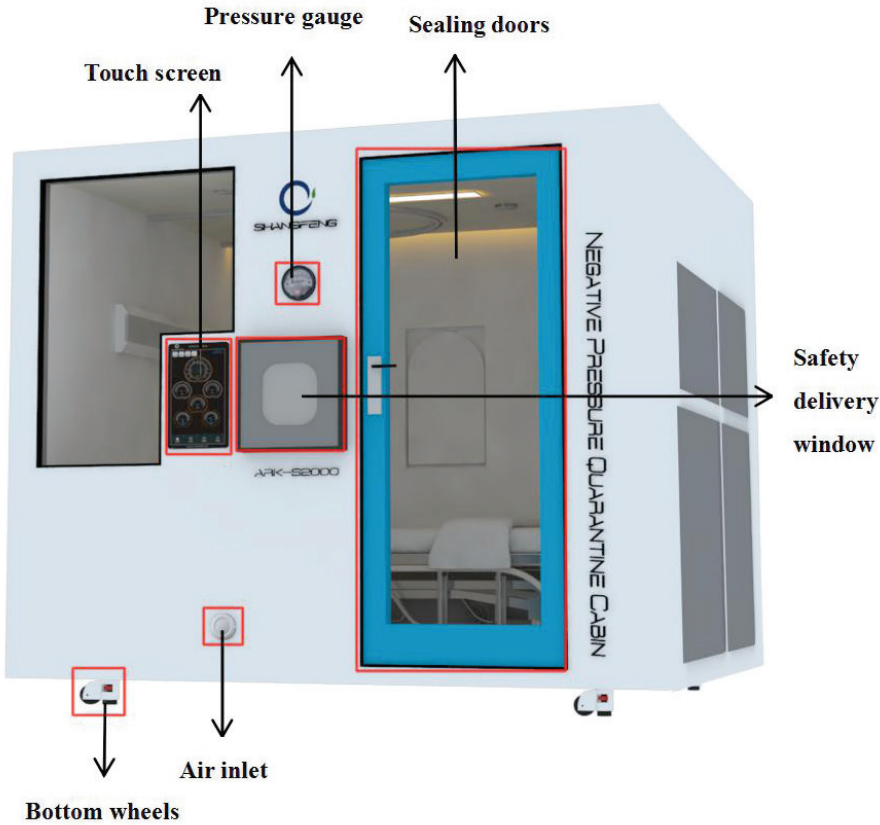
11. Pressure gauge

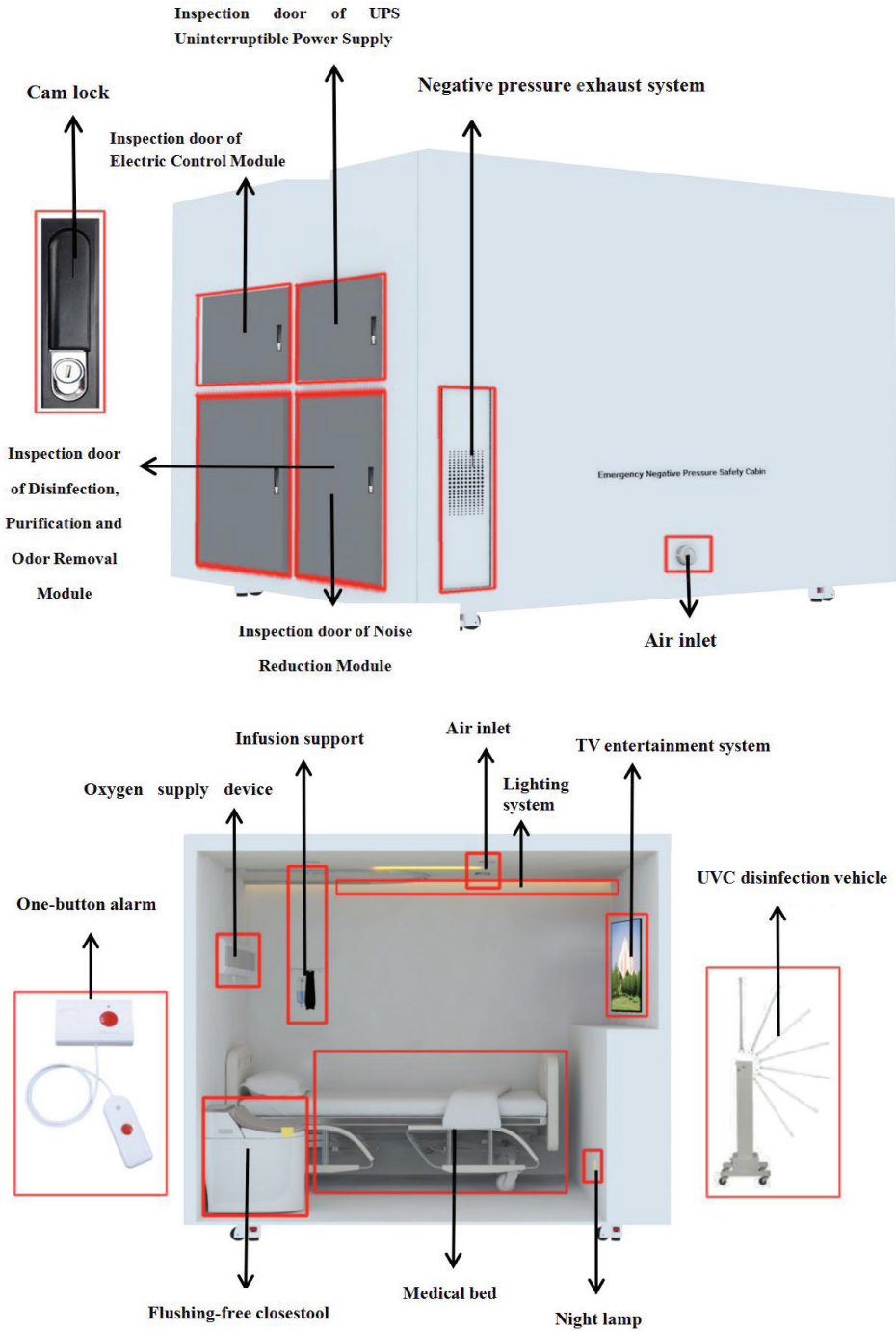
The pressure inside the cabin will be displayed dynamically.

12. Intelligent control system.

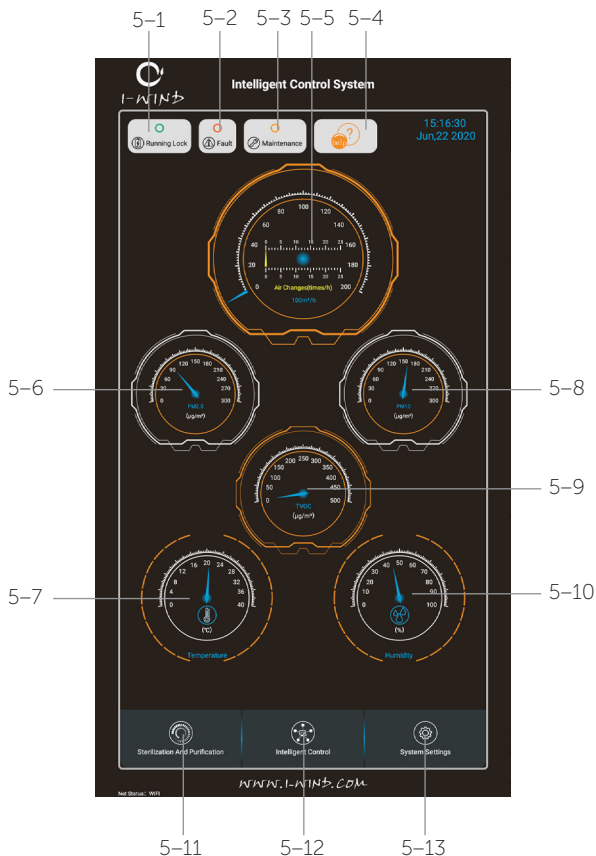
It is composed of electrical control module, sensor and touch screen, which is used for operation and control of various functions by the users.

Product Assembly Drawing





Device Operation



Power-on

After inserting the power plug of the unit into the external power socket, ensure that the power is connected and grounded reliably. The power supply has been connected when the green **power light** on the unit (5-1) is illuminated.

Power on / off

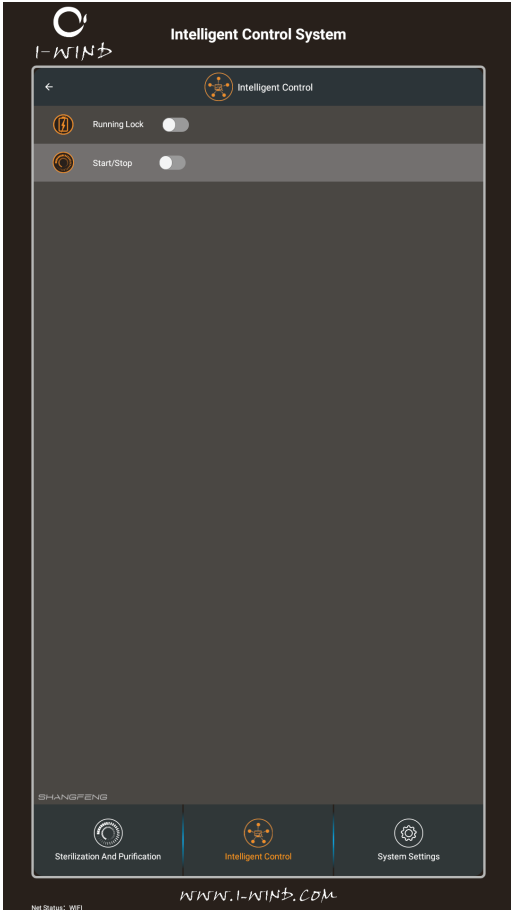
After the power is turned on, press the switch button on the unit, the touch screen on the unit starts initialization. The unit enters the standby state when the screen lights up.

It takes about 10 seconds for the first initialization of touch screen.

When shutting down, please press the switch button (5-1) on the unit. The unit is shut down when the is green **power light** is OFF.

Turn on and off of Running Lock

Click the icon of **Intelligent Control (5-12)** on the touch screen, slide the button of **Running Lock** to yellow, and the running lock will be started. slide the button of **Running Lock** to gray, and the running lock will be closed.



Turn on and off of the disinfection, purification and exhaust system

When the running lock is turned on, click the icon of **Intelligent Control (5-12)** on the touch screen, and slide the button of disinfection, purification and exhaust system to turn on or off the related functions.

System Settings

Click the button of **System Settings (5-13)** to set up the following functions:

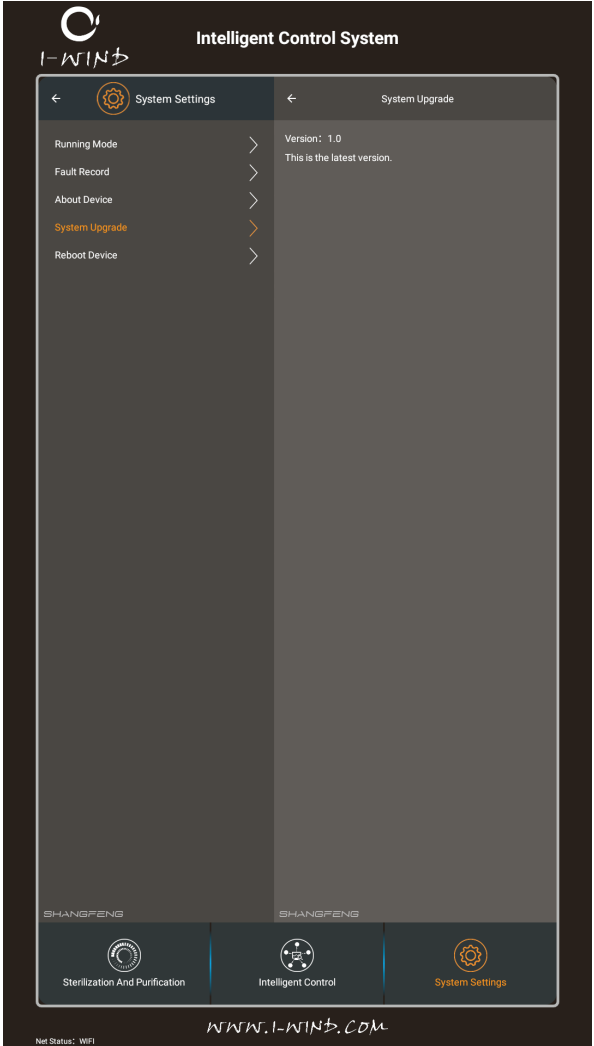
Running Mode: Click the icon of **Running Mode** to select local operation or remote control.

Timing: In the running mode of local operation, timing operation can be selected.



Time setting for data storage: Users can set up data storage time according to their own demands.

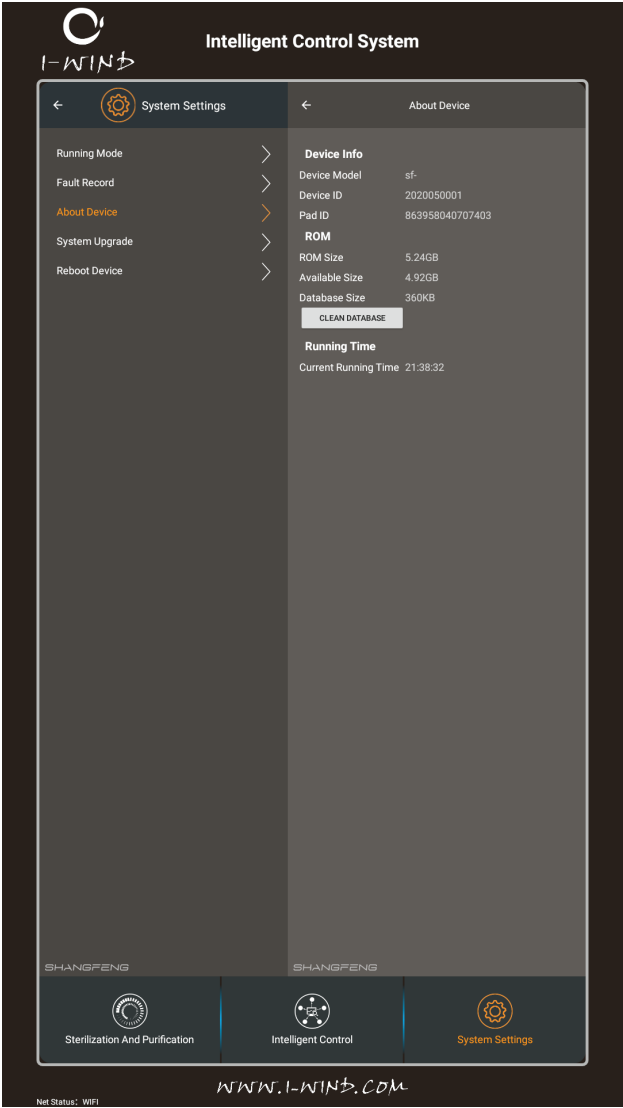
System Upgrade: Click the button to upgrade the system when the device is connected to the Internet.



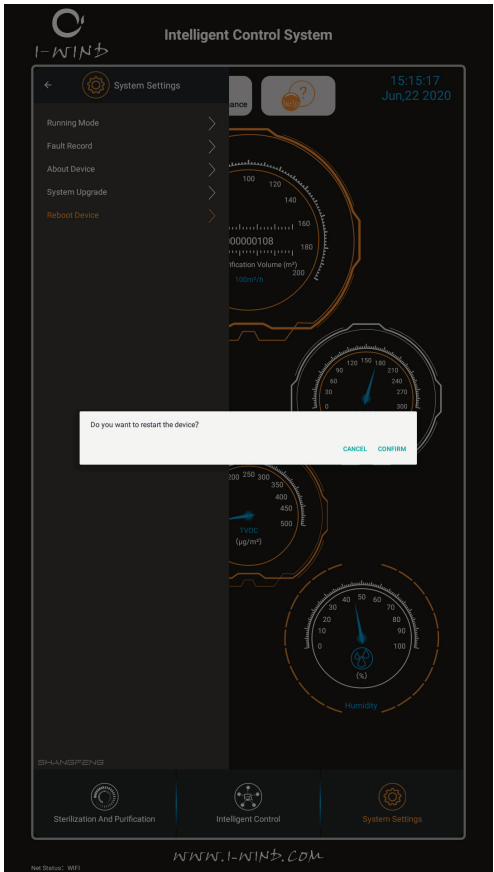
Fault Record: Click the button to check the fault record.



About Device: Click the button to check the related information of the device.



Restart Device: Click the button to restart the device.



Factory data reset: Click the button to restore all parameters of the device to factory settings.

Screen Display

Indication of Running Lock (5-1)

Click the icon of **Intelligent Control (5-12)** on the touch screen, slide the button of **Running Lock**, and the power indicator light will show the current condition.

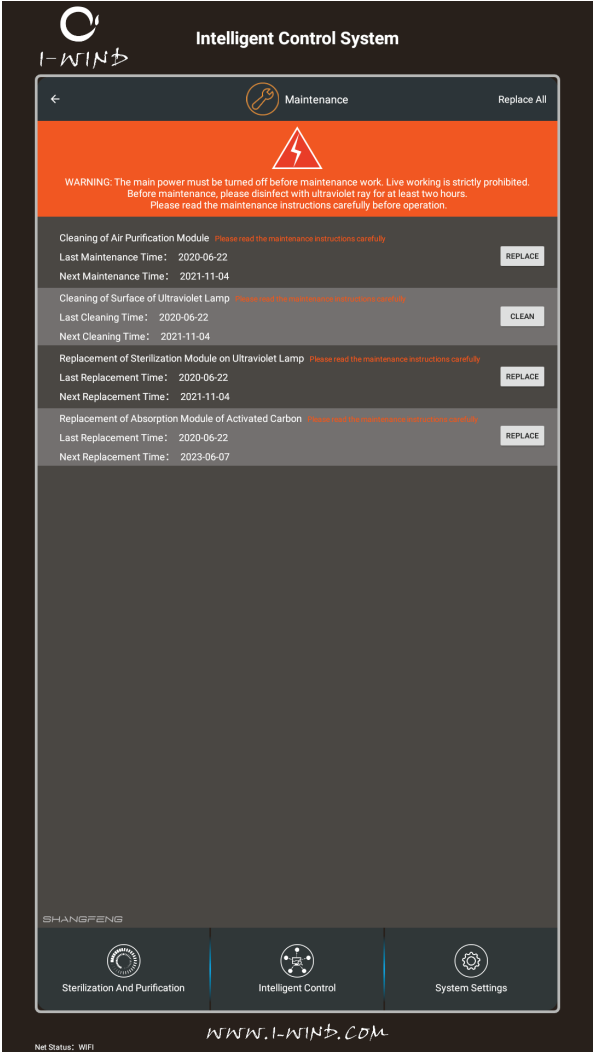
Indication of Fault (5-2)

In case of device failure, the failure indication will prompt in real time. Click the prompt to check the failure condition.

Indication of Maintenance (5-3)

When the device meets the requirements for regular maintenance, the maintenance

indicator light on the top of the touch screen (5-3) starts to flash, indicating that the device needs to be maintained.



Indication of Help Services (5-4)

When using the device, Users can click the button of **Help** to check about the usage, operation and matters needing attention, etc.



Display of air change times per hour and negative pressure value in the cabin (5-5)

Display of the value of PM2.5 (5-6)

Showing the value of PM2.5 under the current operating environment.

Display of temperature (5-7)

Showing the value of temperature under the current operating environment.

Display of PM10 (5-8)

Showing the value of PM10 value under the current operating environment.

Display of TVOC (5-9)

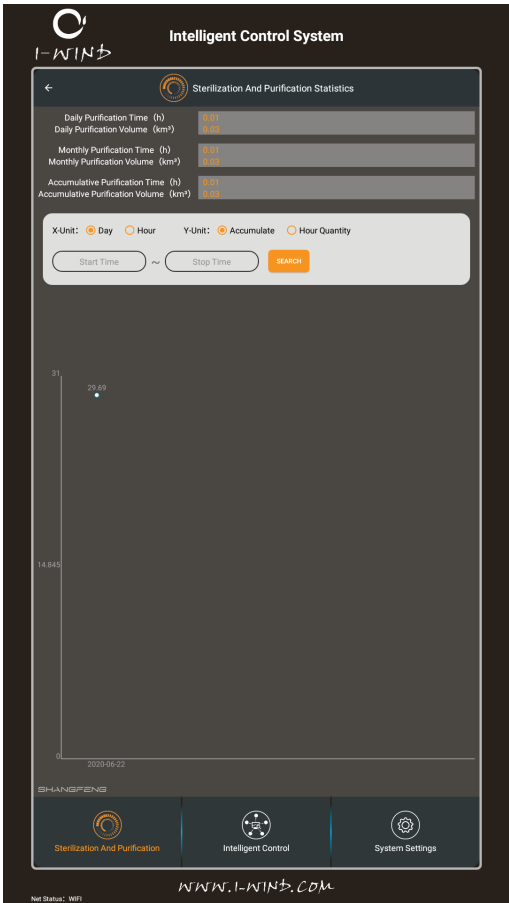
Showing the value of TVOC under the current operating environment.

Display of humidity (5-10)

Showing the value of humidity under the current operating environment.

Sterilization And Purification (5-11)

Click the icon of **Sterilization And Purification (5-11)** on the touch screen to check the daily purification time and volume, monthly purification time and volume and accumulative purification time and volume.



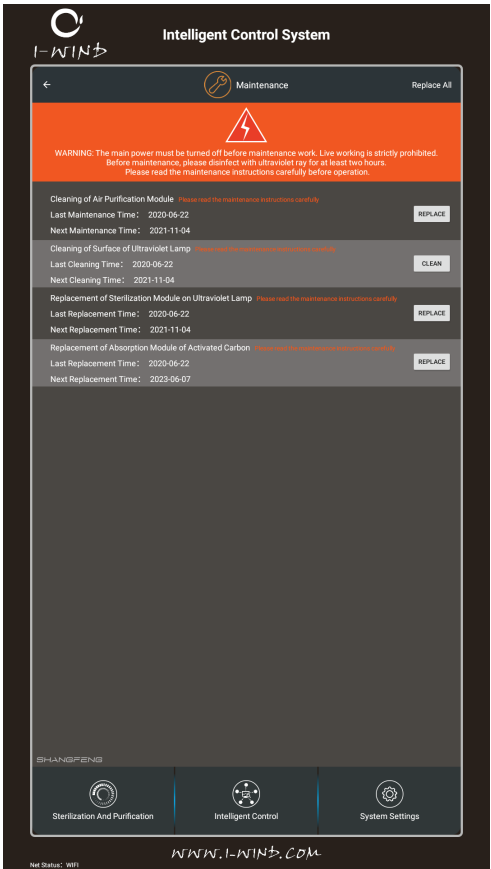
Maintenance

In order to ensure the normal operation of the device, Users need to carry out the routine maintenance of the device.

Indication of Maintenance

When the device meets the requirements of routine maintenance, the maintenance indicator light on the top of the touch screen (5-3) starts to flash, indicating that the device needs to be maintained.

After the maintenance, click the maintenance indicator on the top of the touch screen (5-3) to enter the maintenance interface shown in the figure below. Click the completed maintenance items, and the system can record the maintenance time and items.

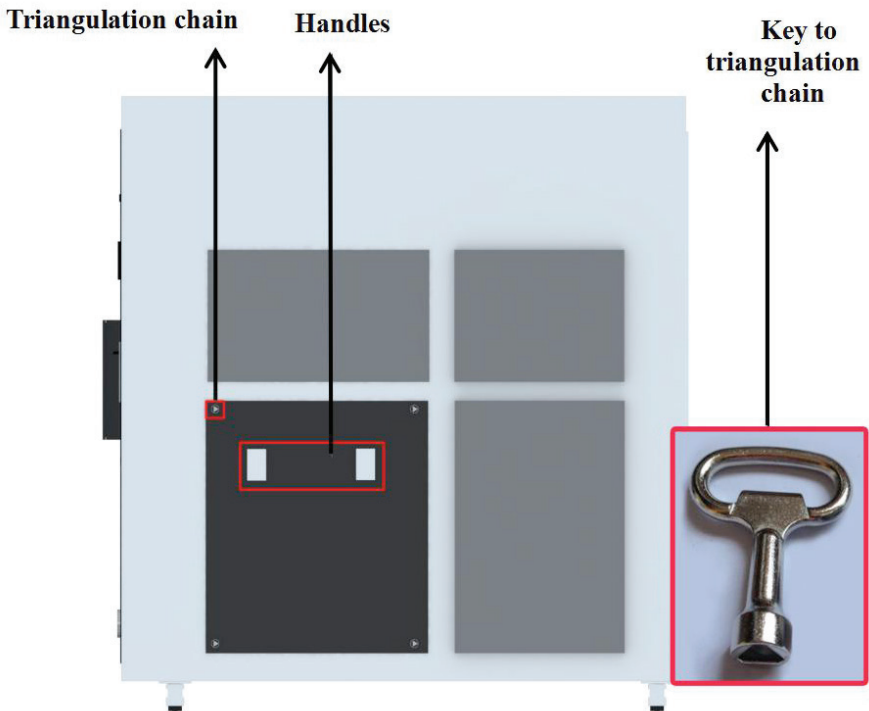


Preparation Work before Maintenance

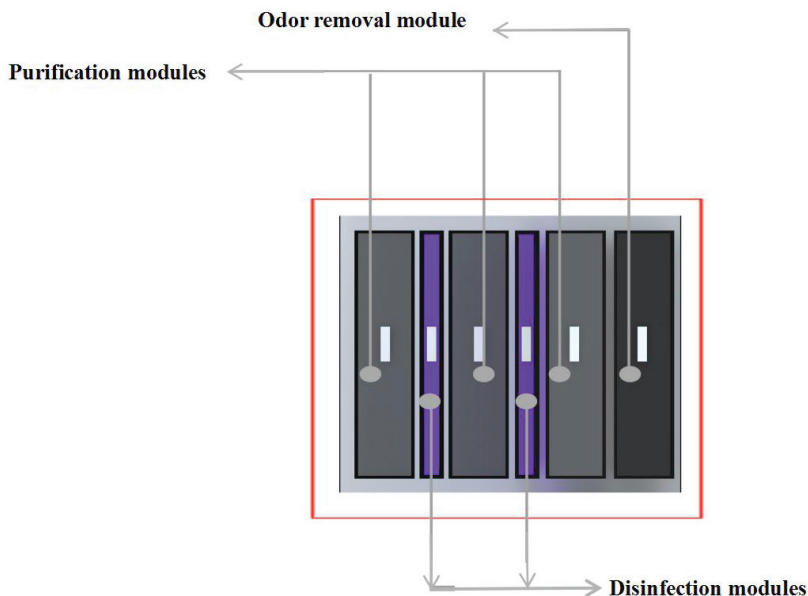
Before the routine maintenance of the device, click the icon of **Intelligent Control (5-12)** on the touch screen, close all air purification modules, ensure that the air purification system is in a closed state, open all air disinfection modules, and maintain continuous disinfection for more than 2 hours; Pull out the power plug of the device, disconnect the device plug and external power supply, and the maintenance must be carried out under power-off state of the device.

Maintenance Operations

Daily maintenance of the purification, disinfection and odor removal modules: Open the inspection door: use the special key (which is stored in the special tool box) to open the **Triangulation Chain** as shown in the picture below;



Pull out the purification, disinfection and odor removal modules as shown in the picture below:



Maintenance of Purification System

Pull out the purification module, put it in the cleaning area, use air pump and brush to clean the dust on the module, or put it in a special cleaning pool, and wash it with 30°C~ 40°C warm water mixed with detergent (The detergent for daily life can be used). Each time the device operates for 4~6 months or the accumulative operation time of the device is more than 4000 hours, the purification system shall be maintained once.

WARNING! The maintenance can only be carried out after the disinfection module works for 2 hours continuously and under the condition of power off.

NOTE! Water washing mode is adopted. The modules can only be reused after they are completely dried.

Maintenance of Disinfection System

Pull out the disinfection module, put it in the cleaning area, and use a soft brush or towel to clean the dust on the UVC lamp tube; Each time the device runs for 4~6 months or the accumulative operation time of the device is more than 4000 hours, the disinfection system should be maintained once.

WARNING! The maintenance can only be carried out after the disinfection module works for 2 hours continuously and under the condition of power off.

The service life of UVC lamp is 10000h, and the lamp shall be replaced if it exceeds the service life. The disinfection effect will be affected if it is not replaced timely.

NOTE! When replacing the UVC lamp, please use the original parts and accessories.

Maintenance of Odor Removal System

Pull out the odor removal module, put it in the cleaning area, and use a pump to clean the dust on the module; Each time the device runs for 4~6 months or the accumulative operation time of the device is more than 4000 hours, the odor removal system should be maintained once.

WARNING! The maintenance can only be carried out after the odor removal module works for 2 hours continuously and under the condition of power off.

NOTE! When replacing the odor removal module, please use the original parts and accessories.

Work after Maintenance

After the maintenance, install the purification, disinfection and odor removal modules in the original order properly;

Close the inspection door and lock it with the special key;

After each maintenance and before reuse, the device shall be put into trial operation for 5 minutes to ensure normal operation.

Technical Parameters

| Items | Technical Parameters | Remarks |
|---|---|---------|
| Dimensions (W x H x D) | ARK-S2000-S: 2000 x 1990 x 1200 mm | ● |
| | ARK-S2000-M: 2600 x 2200 x 2100 mm | |
| | ARK-S2000-L: 5600 x 2200 x 2100 mm | |
| | ARK-S2000-H: Customizable | |
| Value of Negative Pressure(Pa) | -25~-20 | ● |
| Measurement Range of Pressure Gauge outside Cabin(Pa) | -30~+30 | ● |
| Touch Screen outside Cabin (in) | 15.6 inches | ● |
| Safety Delivery Window | Interlocking electric type + Ultraviolet disinfection (400×400mm) | ● |
| Lighting System inside Cabin | Multi-scenario lighting mode | ● |
| Air Change Times Per Hour | 30 | ● |
| Disinfection inside Cabin | Mobile ultraviolet disinfection vehicle | ● |
| | Intelligent ultraviolet disinfection facility | ○ |
| Intercom System | For communications of people inside the cabin with people outside the cabin | ● |
| One-button Alarm | People inside the cabin can give an one-button alarm in case of emergency. | ● |
| TV Entertainment System (inch) | ARK-S2000-S: 15 | ● |
| | ARK-S2000-M/L/H: 32 | |
| Fire extinguishers inside Cabin (Set) | 1 | ● |
| Power Supply (V)/ Frequency (Hz) | AC220/50 | ● |
| Device Power(KW) | ≤0.8 | ● |

| | | |
|---|--|---|
| UPS Uninterruptible Power Supply | The power supply time after power off is equal or more than 3 hours. | ● |
| Device Weight(kg) | ARK-S2000-S: ≤600 | ● |
| | ARK-S2000-M: ≤1000 | |
| | ARK-S2000-L: ≤1800 | |
| Bottom Wheels | Adjustable universal wheels | ● |
| Remote Video Monitoring System inside Cabin | Spherical camera | ○ |
| U-type Infusion Support on the Roof of Inside Cabin | Be used for patient infusion | ○ |
| Oxygen Supply Device inside Cabin | Oxygen terminal + power socket + Lamp + switch + beeper | ○ |
| Flushing-free closetool inside Cabin | Single plastic packing type | ○ |
| Bed | Automobile medical bed | ○ |
| Note ● Standard ○ Optional | | |

Matters Needing Attention

In order to ensure safe, efficient and convenient application of ARK series negative pressure quarantine cabin, please read the following precautions carefully.

External power supply

The external connection of power supply must meet the requirement of technical parameters of the device and must be connected by a professional electrician. When the device is connected to the external power supply, it shall be put into trial operation for at least 2 hours, and it can be used normally after there is no defect in the trial operation.

Application location

The device shall be placed on the flat ground.

Routine inspection and maintenance

The Users should carry out routine inspection on the device in the process of application and do well in daily maintenance.

Inspection before use

During the process of transportation, individual fasteners may become loose. Thus, comprehensive inspection shall be carried out before application to ensure the safety of all fasteners and product application.

After-sale Service

Customer service Tel.: (+ 86) 400-601-8390

Company email: sales@i-wind.com

Official website: www.i-wind.com

Technical Failure

If Users connect the external power supply and operate the device properly according to operation instructions, but the device can not work normally, please open the inspection door, check whether the power leakage protection switch is closed. If it still can not work normally, please contact our after-sales service personnel or authorized agent at the first time, so as to avoid subsequent damage or potential safety hazard.

System Upgrade

When the device is connected to the Internet, click the icon of **System Settings** on the touch screen, and click the button of **System Upgrade** to upgrade the system. If the system fails to be updated, please contact our after-sales service or authorized distributor at the first time.