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ROBOTS THAT WE WANT



**UV Savo**  
**Disinfection Robot**

# Intelligent Ultraviolet Disinfection & Sterilization Robot



**There are many diseases that are spreading by air**

New coronavirus pneumonia, atypical pneumonia, infection with highly pathogenic avian influenza, measles, epidemic meningitis, diphtheria, pertussis, tuberculosis, scarlet fever, influenza, mumps, rubella, chicken pox, hand, foot and mouth disease, infectious mononucleosis, pneumonic plague. Respiratory diseases are generally transmitted through the air and droplets.

**Ultraviolet ray is an effective way to sterilize the air**

In the "Novel coronavirus infected pneumonia treatment scheme (trial fifth edition)" published by the China National Health Commission, it is mentioned that coronavirus is sensitive to ultraviolet light and heat, and most disinfectants can effectively inactivate the virus. Ultraviolet disinfection lamp should be used in strict accordance with the instructions. Both people and pets should leave the room where they are being disinfected to avoid damage to the skin and eyes.

Air disinfection has obvious effect in the control of respiratory tract infectious diseases. In the terminal disinfection after the transfer of confirmed or suspected cases, it is recommended that professional health personnel to use peroxyacetic acid or hydrogen peroxide disposal or **mobile ultraviolet** disinfection treatment under the condition of no one.

Coronavirus is a kind of RNA virus with membrane. When the envelope is damaged by disinfectant, RNA is also very easy to be degraded, thus inactivating the virus. Because of this membrane, coronavirus is sensitive to organic solvents and disinfectants, and 75% alcohol, ether, chloroform, formaldehyde, chlorine-containing disinfectants, peracetic acid, and **ultraviolet light** all can inactivate the viruses.

## About : UV Savo

### Intelligent ultraviolet disinfection and sterilization robot

Intelligent ultraviolet disinfection and sterilization robot takes mobile robot platform as the carrier, and is equipped with intelligent pulse ultraviolet disinfection module, which can realize the requirement of 360° non-dead corner disinfection of public space air. At the same time, robot self-navigation technology and AI environment recognition technology can be used to automatically plan the path and judge the disinfection time required by the working environment, so as to achieve one-stop disinfection management. To ensure the air health in public places, it is very important for the public to create a comfortable, clean and hygienic environment.

### Parameters



Short-wave UVC ultraviolet to disinfect and sterilize bacteria. Within a few minutes, DNA and RNA of bacteria are destroyed and killed, which can effectively achieve the elimination effects. After testing, with the high level disinfection mode, it can achieve 99.9999% killing effects for the spores on the environmental surface (smooth surface, rough porous surface) and various drug-resistant bacteria, completely meets the high level disinfection requests. With the mobile robot as the carrier, for the environmental surface and air with the autonomous mobile multi-point disinfection, it takes about 150 minutes to complete the 1000 square meters of the overall disinfection work, over 10 times than the previous manual, fixed disinfection efficiency and effects.



- Fuselage size : 600\*500\*1225
- Maximum speed : 100cm/s
- Site precision : ±20mm~30mm
- Serving time : 6H
- Rotation radius : spin around

### Product elimination performance related parameters

- Direction of ultraviolet irradiation: 360° omnidirectional
- Cumulative light intensity: 270UW/CM2
- UV power: 180W
- Single point of disinfection time: 10 minutes
- Moving path coverage radius: 6 m
- Lamp tube service time: 8000 hours

## Product features

**Autonomous navigation:** provides a wide range of lidar building map, lidar positioning, lidar path planning, and lidar navigation functions.

**Intelligent obstacle avoidance:** lidar, ultrasonic, safe lidar (located in the front of the fuselage, the detection distance is 40 meters, the detection angle is 270 degrees), can achieve intelligent obstacle avoidance.

**Dual working modes:** it can realize the fixed point position duty work, and it can also realize the fixed time fixed route customization work.

**Automatic docking:** the robot can be charged automatically when the power is lower than the threshold value, and it can resume to work automatically after charging.

Optional body temperature/ thermal imaging/ visible light camera. Support voice/intelligent alarm, remote wireless transmission

## Two operation modes

### Duty mode

According to the position of fixed point ( with the charging pile as the starting point ), automatic disinfection and sterilization is carried out on the fragmentation area. It is followed by no one in the whole process, avoids obstacles and cruises automatically .

In case of fixed obstacles ( personnel, temporary items, etc. ) not marked by the map, it can avoid them independently, and automatically plan the path within the jurisdiction areas .

### Customization mode

According to the requirements of the site environment, the robot can adopt the regular working mode to carry out a large range of fixed – point disinfection.

The working time is selected as the off-duty time of personnels or the time when no personnel enters, so as to avoid the contact of ultra violet light and personnels .



### UV Savo Disinfection Robot Parameters

Size	Chassis size (mm)	550 * 450 * 250
Weight	With battery	50KG
Power supply	Battery	Ternary lithium battery
	Battery capacity	24V / 30Ah
	Charging time	≤2H
	Service life	80% after 300 cycles
	Maximum Charging voltage	29.4V
	Endurance time (no load)	6H
Driving wheel	Dimensions (wheel diameter * wheel width mm)	200 * 42
	Material	Polyurethane (PU)

		(no water, no oil, no dust)
Ground conditions	Vertical obstacle clearance ability	10mm
	Ability to cross the gully	20mm
	Maximum climbing angle	5 °

	Power	200W
	Maximum revolving speed	250r / min
	Maximum Torque	30NM
Universal wheel	Material	nylon
	Dimensions (wheel diameter * wheel width mm)	63 * 50
	Rotation radius (mm)	53
	Single load	> 100KG
Performance	Maximum load	50KG
	Maximum operating speed	1.5M / s
	Navigation accuracy	± 30mm
	Direction	360 ° rotation
Security	Emergency button	emergency stop
	Collision bar	Collision triggers an emergency stop
	Ultrasound	Located in front of and behind the cabinet, two pcs each side
	Indicator light	Operating status indication
	Voice broadcast	Vehicle status report
	Human induction	Thermal infrared human sensor
	Remote start and stop	Configure remote control module to start and stop remotely
Navigation	Navigation method	SLAM navigation
	Route plan	Automatic planning / manual route planning
	Navigation sensor	TOF Lidar (40 meters)
Communication	Wireless network	2.4G / 5G WiFi
	Debug port	Ethernet RJ45
	USB	USB2.0
	Wireless transparent transmission	433M
Surroundings	Ambient temperature	0 °C ~ 45 °C
	Environment humidity	Relative humidity 5 ~ 95% (house frost)
	Operating environment	Indoor use only (no dust, no corrosive gas)
	Protection grade	IP20
	Ground anti-skid coefficient	≥0.5
	Ground requirements	Concrete level ground