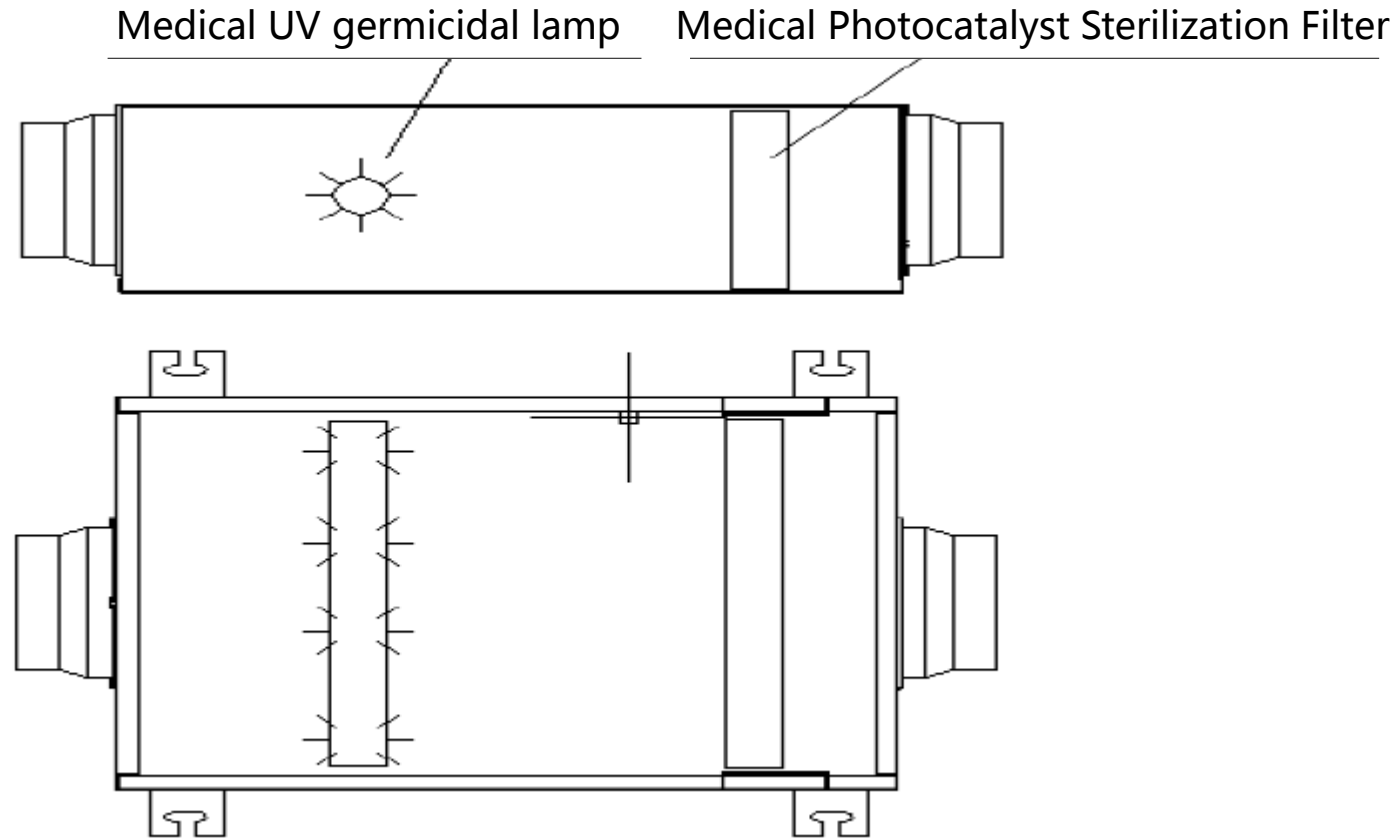




***Fresh Air Sterilization Box  
to Fight the Virus***

# Fresh air solutions to fight **COVID-19**.(UVC + photocatalyst)

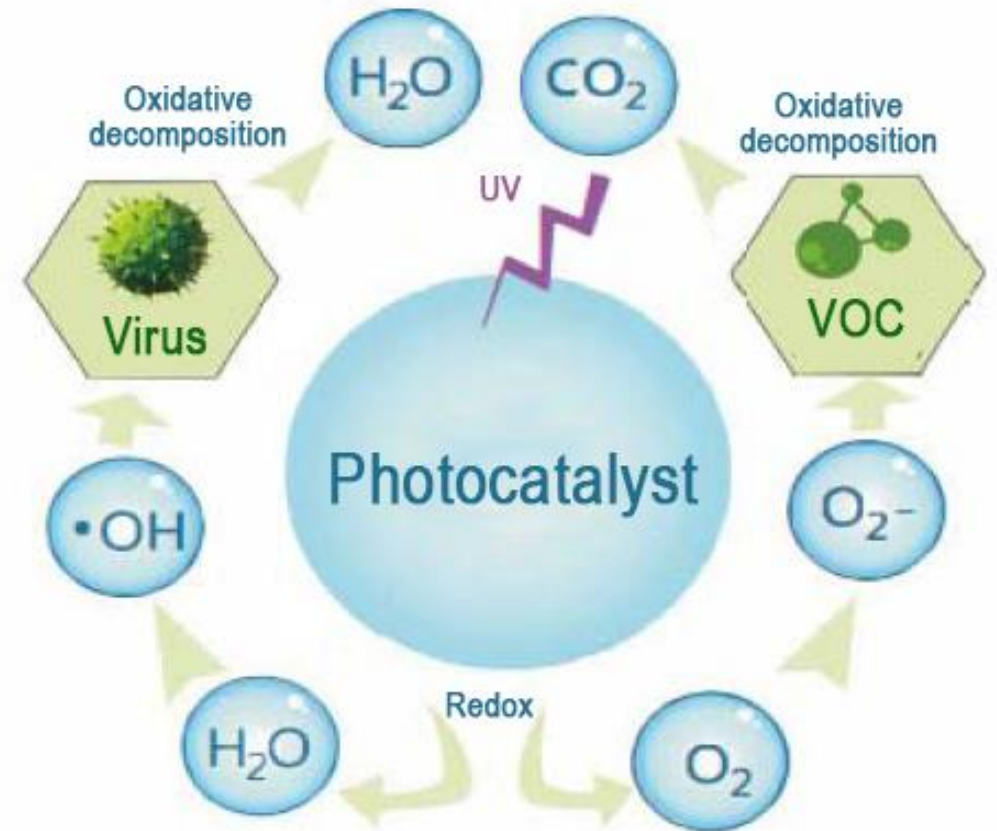


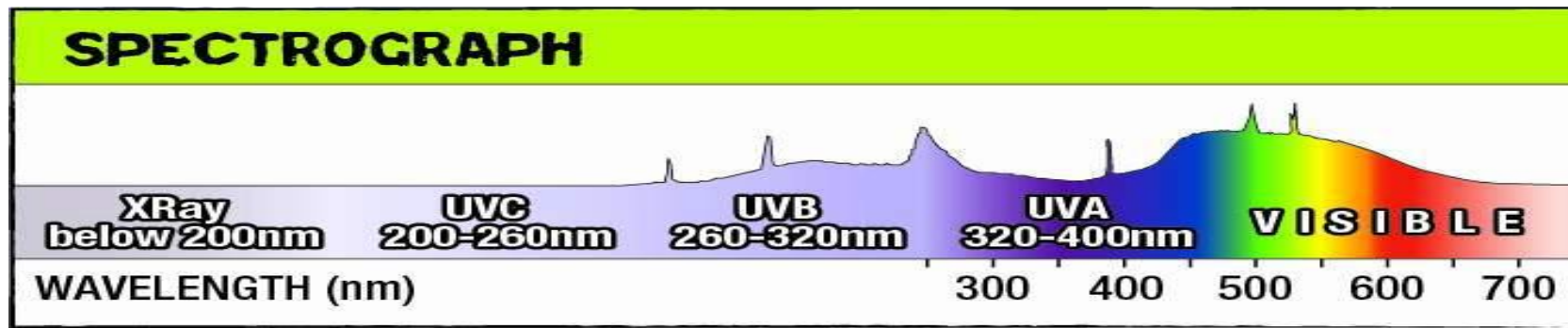
## Fresh air sterilization box

Model	Sterilizing Airflow (m3/h)	Power (W)	Spigot	Size(W*H*D) mm	Weight (KG)
YUV-100	≤400	4	98	400*330*200	5
YUV-200	≤800	4	194	602*460*270	10
YUV-250	≤1300	6	242	650*520*388	12

# Fresh air sterilization box working principle

A germicidal light source (UVC) irradiates the photocatalytic material (dioxigentitanium oxide) to combine water and oxygen in the air for photocatalytic reaction, which will quickly produce high concentration of advanced germicidal ion groups (hydroxide ions, superhydrogen ions, negative oxygen ions, hydrogen peroxide ions, etc.). The oxidizing and ionic properties of these advanced oxidation particles will decompose the chemically harmful gases and odors quickly, subside the suspended particulate matters, and kill the microbial contaminants such as viruses, bacteria, and mold.





**Ultraviolet (ultraviolet):** Ultraviolet refers to the general term for radiation in the electromagnetic spectrum with a wavelength from 10nm to 400nm.

**UVA:** It is ultraviolet rays with a wavelength of 320 ~ 400nm. Long-wave ultraviolet rays penetrate clothing and human skin much stronger than medium-wave ultraviolet rays, and can reach the deep in the skin. It can act on melanin in the epidermis, which causes skin melanin pigmentation and darkens the skin, protects against ultraviolet rays, and protects the skins. So long-wave UV is also called "tanning segment".

**UVB:** It is ultraviolet rays with a wavelength of 260 ~ 320nm. Medium-wave ultraviolet rays have certain physiological effects on human skin. A large part of this UV is absorbed by the skin epidermis and not able to penetrate into the skin. However, due to its higher energy, it can damage the skin, dilate the dermal blood vessels in the irradiated area, or cause redness, swelling or blisters on the skin.

**UVC:** It's ultraviolet light with a wavelength of 200 to 260 nm (nanometers). Short-wave ultraviolet rays are absorbed by the ozone layer when they pass through the earth's surface atmosphere and cannot reach the surface. Short-wave UV has an important effect on the human body.

YMGI customized ultraviolet germicidal lamp can concentrate high intensity to kill bacteria and viruses in a short time. The wavelength of 254nm is easily absorbed by living organisms. The DNA, which acts on the organism's genetic material, destroy the DNA to make the bacterial and virus die.

## Sterilizing objects

Virus	Mycosporosis	Bacteria	Bacillus anthracis
	flu virus		Tetanus
	Poliovirus		Shigella
	Hepatitis B virus		E.coli
Mold spores	Aspergillus niger		Glucosamine
	Mucor		Glucococcus
	Penicillium		

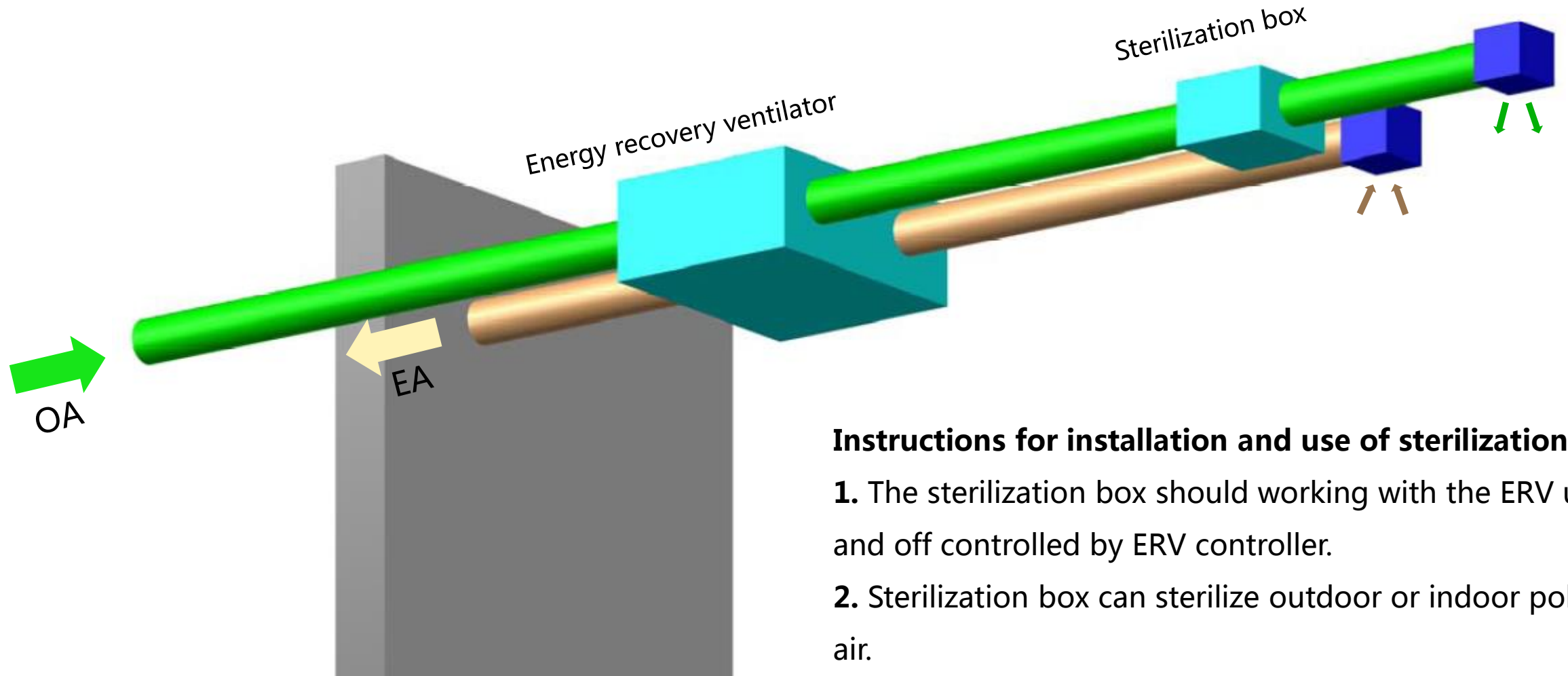
### Why is ultraviolet light capable of killing new coronaviruses?

All living things, including humans, are made up of cells. Viruses are cellless. They mainly consist of protein shells and nucleic acids (the genome is composed of one or more nucleic acid molecules: DNA or RNA).

Strictly speaking, they are not living things. Because of this, the virus can only survive, metabolize, and reproduce in the cells of a certain organism. Once detached from the living body, it will die in a short time. How short depends on the strength of the virus itself.

The new crown virus is replicated by RNA. The process of ultraviolet sterilization mainly affects the nucleic acid (RNA) of the virus and destroys the virus' protein layer, which affects its survival and replication ability. This process is medically called "Inactivated."

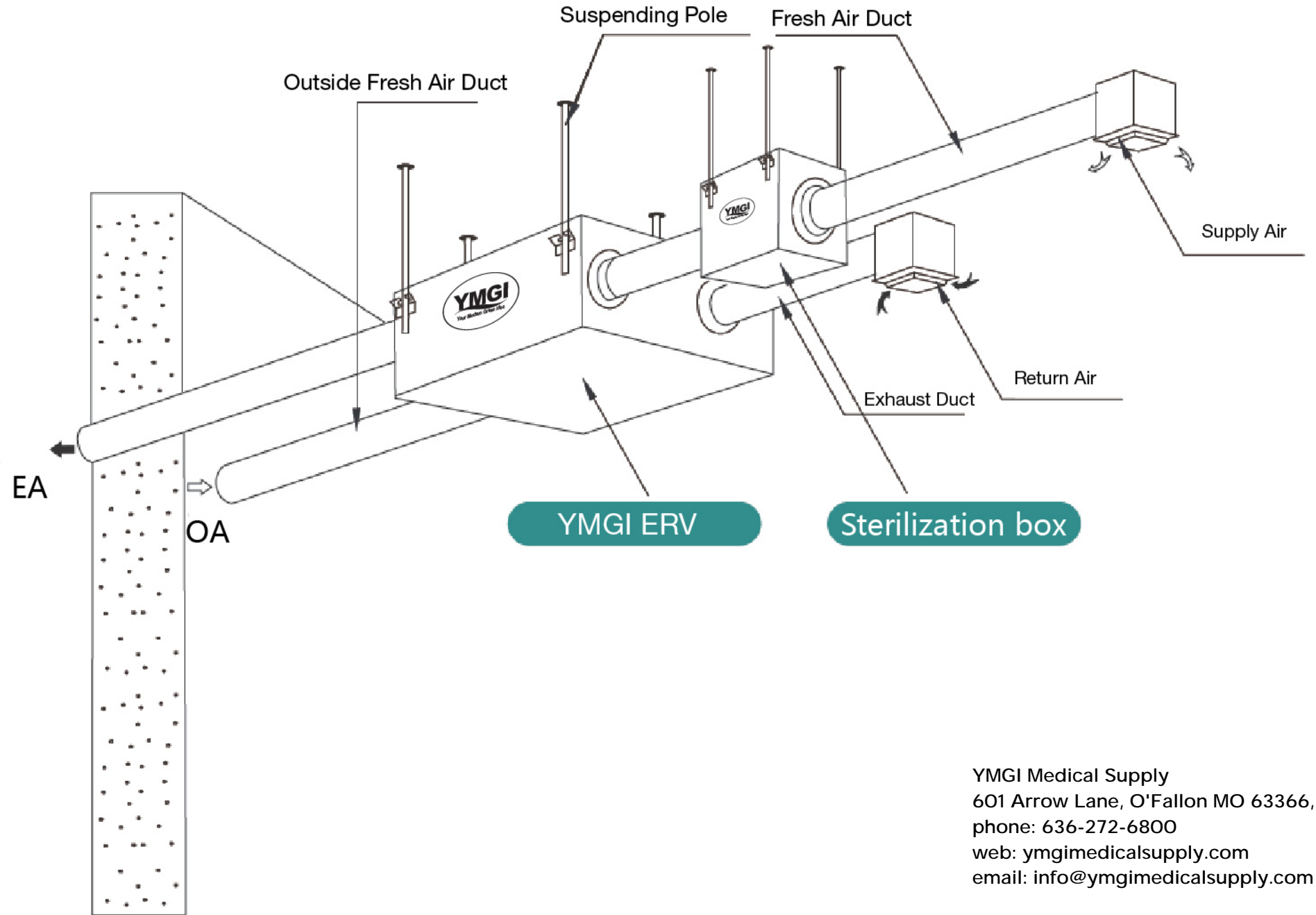
# Fresh air sterilization box installation



## Instructions for installation and use of sterilization box:

1. The sterilization box should work with the ERV unit, on and off controlled by ERV controller.
2. Sterilization box can sterilize outdoor or indoor polluted air.
3. It is recommended prior to install the sterilization box on the supply air and exhaust ducts.
4. Both ends of the sterilization box need to be connected to the main pipe with hoses.

# Fresh air sterilization box installation



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