

# Corona Discharge

## Answers to commonly asked questions about corona discharge devices

### Q. Are these products ionisers?

A. No. They are corona discharge air purifiers. An ioniser uses electrostatic precipitation to negatively charge particles. These products are not ionisers or ozone machines, but a new class of air decontamination devices known by plasma scientists as 'non' thermal ionic corona discharge plasma purifiers. Although a corona discharge device has an ionisation effect internally, it uses electronic plasma incineration, similar to a lightning strike, to destroy airborne contaminants.

### Q. Are they ozone generators?

A. No. Although one of the by-products of corona discharge is a small output of ozone, along with negative ions and ultra violet light, ozone generators do not have proven health benefits.

### Q. Is the level of ozone output safe?

A. Yes. OSHA guidelines define permissible ozone exposure limits at 0.1 parts per million parts of air. These products emit less than 0.04 parts of ozone per million.

### Q. How do these products differ from HEPA filters?

A. HEPA filtration devices capture particles (down to 0.3 microns in size), and the filters require replacing when they become saturated with particulate. Corona discharge devices are cold incineration devices, which actually destroy airborne contaminants. Different contaminants are neutralised and destroyed in different manners, depending on their chemical properties. Corona discharge devices are not filtration devices, and no parts need to be replaced or serviced.

### Q. How should these products be cleaned?

A. Once a week, blow into the screen to eliminate any carbonised accumulation on the emitter. Also wipe the grill screen clean. There are no user-serviceable parts inside these products.

### Q. Will fluids damage these devices?

A. Yes. You should avoid allowing fluids to enter the grill screen. However, damp or moist environments will not cause any damage.

### Q. How are different airborne contaminants processed by these products?

A. Airborne contaminants are processed as follows:

- Virus & Bacterial Germs Incinerated by the corona discharge
- Odour Oxidised into deodorised compounds
- Chemicals Oxidised into benign chemicals
- Dust & Dust Mites Carbonised and vaporised by incineration
- Moulds Carbonised and vaporised by incineration
- Smoke Solids are carbonised and gases are oxidized

### Q. What type of product testing has been done?

A. The ability of the ionic discharge plasma to destroy biochemical agents has been proven at leading Universities & Research Institutes. Wein Products has been the first to introduce this technology as wearable, recirculating, ionic air purifiers that is lightweight and effective. Product testing of the Air Supply is ongoing at UCLA School of Microbiology in the US, against bacteria and has received an astonishing 90% reduction in germ colony growth. A further study was recently undertaken by the British governments CBDE (Chemical & Biological Defence Establishment) at Porton Downs, UK, on advanced military and law enforcement versions. Check out <http://www.weinproducts.com/> for further background research on these products.

