



# MAG OXYGEN

### **EXPLANATION OF OPERATION**



## HOW DO IONIZERS WORK?

 An ion is an atom that has one or more electrons (positive ions or cations) removed or one or more electrons (negative ions or anions) added.









The ionizer is a device which, thanks to electrified needles, can electrically charge (and therefore ionize) the gas molecules present in the air and therefore also the oxygen.

It works like this:

- It creates negative ions (Anions) by taking electrons from the ground and transferring them to the surrounding air molecules;
- The ions receive a charge of the same marking as the ionizer needle and are therefore rejected;
- The electrically charged molecules are moved away from the needles of the opposite electric charge;
- Negative ions, by binding to the polluting particles present in the air (dust, aromas, smoke, pollen and bacteria), charge them electrostatically;
- Pollution particles therefore tend to fall to the ground when their weight exceeds that of air, instead of remaining in suspension.



# BENEFITS OF NEGATIVE IONS

Approaching the needles of the ionizer, it can feel like a light breeze. It is perceived because the air exiting the ionizer is rich in ions and therefore cleaner.





The beneficial effect of these "negative ions" is to neutralize all pollutants in the air such as bacteria, mites, pollen, spores, various dust, bad smells, cigarette smoke and exhaust gases, which cause various respiratory diseases and allergies for many people.



### USED TECHNOLOGY

The best ion generators use needle technology, which according to physical and chemical principles can only generate ions.

Technology picture of our device:





constant high yield over time.

### PLASMA "IONIZER" SYSTEM WITH CROWN DISCHARGE

It occurs between an active electrode and an electrode with a large external surface (circular passive electrode), between which a voltage of a few kV is applied. In particular, the active electrode generates an electric field high enough to produce free charges, while the external electrode also called passive electrode acts primarily as a charge collector. The device consists of a series of needle generators (39), the signal generation unit (2.), the control unit (3.) and a forced ventilation system (1.). The electrode configurations commonly used to obtain the corona effect are represented as per the technical figure which is the configuration that guarantees the best results and does not require maintenance.





Corona discharges are usually generated with pulsed currents with medium frequencies. A pulsed corona is obtained by applying a short voltage pulse controlled by a microprocessor and generated by a transformer to the electrodes, with the result of generating a discharge invisible to the human eye.



#### **HEADQUARTER MANUFACTURER**

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