

# Water Ozone Generator WDH-WP15



Dear Customer,

You have chosen a high-quality product. To ensure that you get a lot of enjoyment from this product, here are a few more tips:

**In case of any problems:**

We hope that the unit meets your expectations! If, despite the greatest possible care, there should ever be cause for complaint, please contact us briefly, as we are very concerned about your satisfaction and would like to clear up any misunderstanding.

**Important safety instructions:**

This unit produces large amounts of ozone ! Ozone is very toxic in these concentrations and must not be inhaled.

The unit may therefore only be operated by persons who are well acquainted with the mode of action and the application of ozone in water!

This ozone generator contains high-voltage elements. Only qualified personnel or electricians are permitted to open the unit or carry out repairs !

This water ozone generator is not suitable for public baths or swimming facilities !

Water or liquids that have been treated with ozone release a large part of this ozone gas upwards into the air for a short time. Therefore, during the ozone treatment and up to 30 minutes afterwards, no persons should be in the immediate vicinity of the water or liquid that has been treated with ozone ! They could inhale the ozone gas or absorb it through their mucous membranes and thus unintentionally cause damage to their health!

- After starting operation, the area to which ozone is added must be left immediately !
- During operation, neither people nor animals are allowed to stay in the area of the ozone application and the air that is exposed to possible ozone vapours ! This also applies for a period of 30 minutes after the end of operation of the ozone generator.
- Please note that, depending on the degree of insulation, neighbouring rooms and/or adjacent objects may also be exposed to ozone during operation !
- Plants can be severely damaged or even killed when exposed to high concentrations of ozone !

Notes: For operation within the Federal Republic of Germany, the guidelines of the German employers' liability insurance associations must be observed. For operation in other countries, the national and local rules and regulations applicable there must be observed. Ozone in higher concentrations (above 0.1 ppm or 0.2 mg ozone/m<sup>3</sup>) is a toxic gas and oxidant and is classified as dangerous and harmful to health when in contact with the human body ! Precautions must be taken to prevent uncontrolled release of ozone.

The MAK value valid in Germany (MAK = Maximum Workplace Concentration) is currently 0.1 ppm or 0.2 mg ozone/m<sup>3</sup>. In addition, in the USA there is the value that is immediately (acutely) dangerous to health (IDLH), which is 5 ppm or 10 mg ozone/m<sup>3</sup> [NIOSH, 1994]. Other limit values apply in some cases for other countries.

If you feel unwell (dizziness, severe coughing, severe eye irritation, breathing problems or pain) in connection with the operation of the ozone generator or ozone, we recommend that you seek medical treatment or a doctor immediately.

**Safety instructions:**

- Watch out for electricity (danger to life), never enter or insert objects into the unit !
- Do not place any objects on the unit !
- Do not block the exhaust air and/or the supply air openings of the unit and please ensure sufficient space/clearance around the unit !
- Make sure that there is sufficient air supply to the unit, otherwise it may lead to a reduction in performance and, in the worst case, to overheating and/or fire ! Please always keep a distance of approx. 50 cm to the wall at the front and rear (ventilation openings) to avoid possible overheating of the unit !
- Make sure that no moisture gets into or onto the unit !
- Keep the unit away from heat sources !
- Use only the recommended voltage (220V - 240V / 50Hz) to operate the appliance !
- Make sure that the power cable is unfolded (untied) before connecting it to the socket !
- Make sure that the plug is cleanly and properly connected to the socket before using the appliance !
- Make sure that highly flammable substances (e.g. gases/oils etc.) are never in the vicinity of the unit !
- Do not use insect, oil or paint spray etc. near the ozone generator. This may cause damage to the unit or even fire !
- If you are not going to use the unit for a long time, switch it off and disconnect the mains plug !
- Do not disconnect the mains plug by pulling on the power cable !
- Make sure that the unit is earthed at all times !

**Please switch off the unit immediately and disconnect it from the mains/power supply if anything seems to be wrong !!! In this case, please contact a specialist and do not attempt to repair the unit yourself !!!**

**Operating information:**

The ozone generator converts existing oxygen into ozone without the use of chemicals and thus does not pollute the environment.

Ozone is a special form of oxygen. Normally, two oxygen atoms combine to form an oxygen molecule. The ozone molecule, on the other hand, consists of a loose compound of three oxygen atoms (O<sub>3</sub>).

Ozone is one of the purest and most powerful oxidising and germicidal agents. (Ozone is three thousand times more powerful in killing bacteria than chlorine !)

Oxidation eliminates almost all odours emanating from bad water. This also includes the particularly stubborn odours such as: Algae, fish, animal, kitchen, waste, urine, chemical and musty odours, as well as all other odours and smells. Ozone removes odours by breaking down the molecules responsible for the odours, such as hydrogen sulphide (H<sub>2</sub>S), ammonia and other organic compounds through chemical reactions.

Almost all germs and bacteria as well as mould are also killed by ozone.

The shelf life of ozone depends, among other things, on the temperature (and humidity). Ozone starts to decompose again immediately after it is formed, but usually has a half-life of about 20 minutes under normal conditions. After this time, the ozone decomposes and converts back into oxygen.

The odour that remains is mostly based on a series of harmless compounds caused by the reaction of unsaturated organic substances with ozone.

**Areas of application:****Water treatment**

Disinfection/degermination, taste neutralisation, odour neutralisation, oxidation (deferrisation and demanganisation as well as destruction of pesticides, cyanides, phenols and algae).

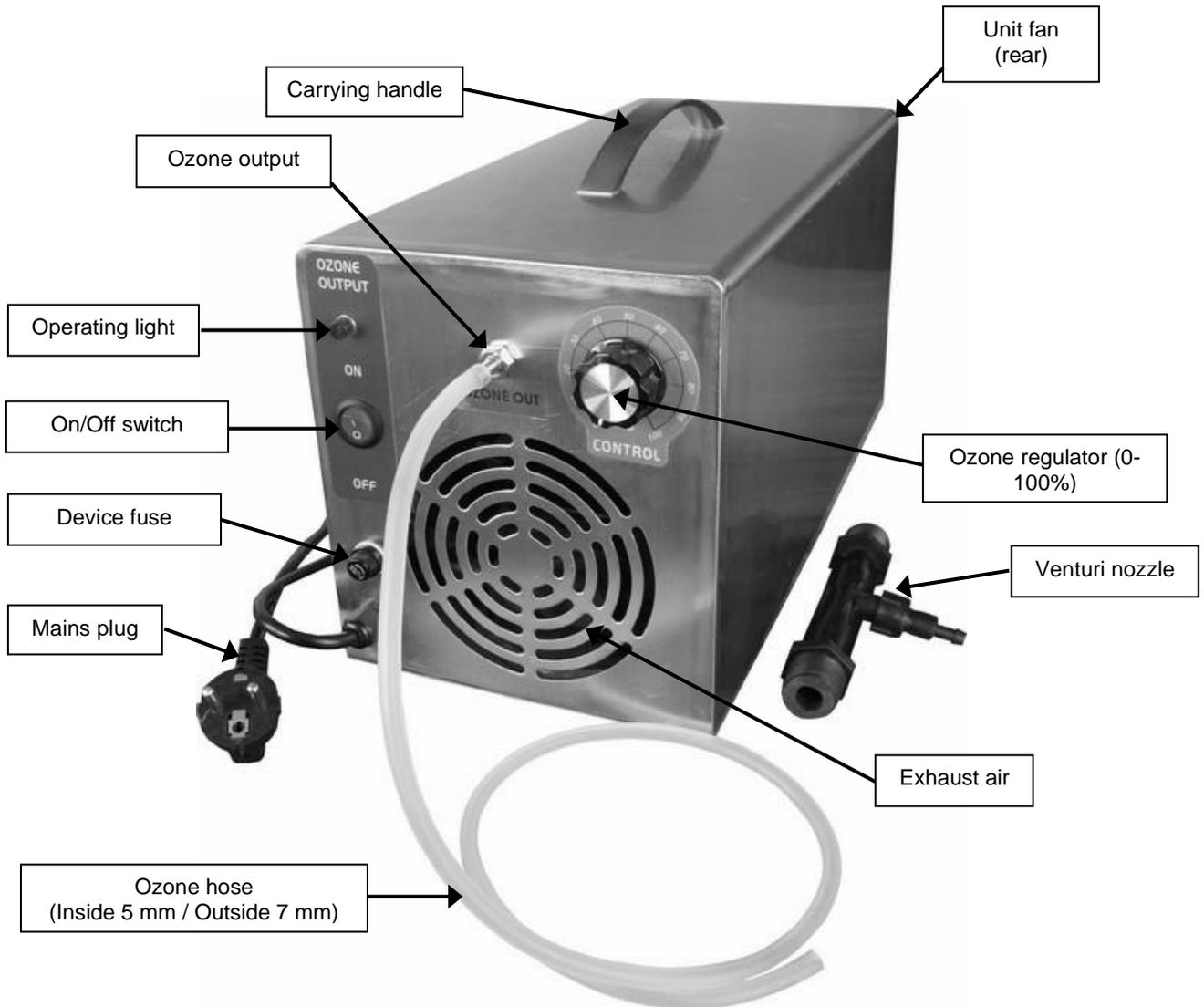
For example:

- Drinking water
- Pond water
- Swimming pool water
- Waste water
- Fish farming and the commercial and ornamental fish sector
- Service water, such as cistern water, well water and other forms of water recycling and water treatment

**Other fields of application**

- Ozone kills the mould immediately and even destroys the mould spores permanently.
- Ozone can be used to disinfect pipelines, water basins, containers, sanitary areas and other facilities and objects relatively free of germs, fungi and bacteria, because the disinfecting effect of ozone is three thousand times stronger than that of chlorine. Practical areas of use include: Doctors' surgeries, laboratories, hospitals, cold stores, food handling areas, hotel rooms, cars, fitness facilities, dry cleaners, laundries and sanitary facilities.
- Ozone sustainably eliminates all forms of odours, examples are: Animal odours, fire odours, tobacco odours, food odours, waste odours, chemical odours (paints, varnishes, solvents), musty smells, toilet odours and acid odours (butyric acid etc.).

**Device description:**



**Venturi nozzle:**

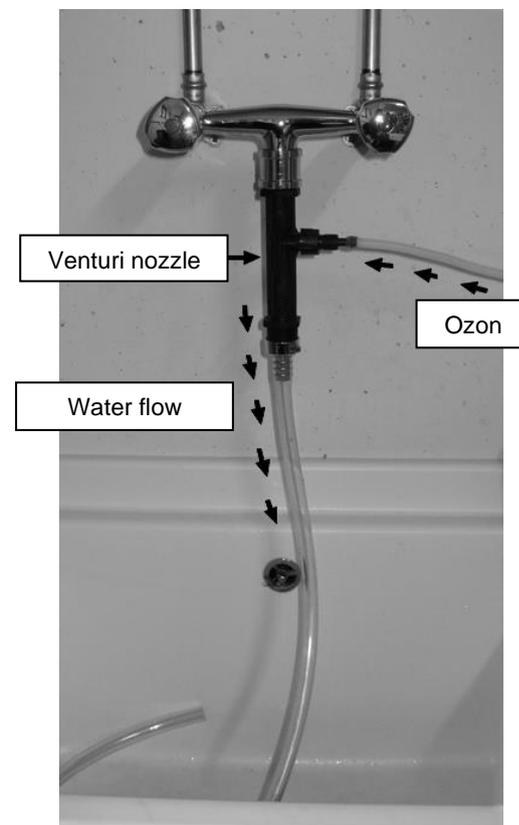
With the Venturi nozzle, the ozone gas can be very practically integrated into a watercourse.

The venturi nozzle has a valve at the ozone inlet and when water flows through the venturi nozzle, this valve is opened by the flow pressure and the ozone mixes with the flowing water (liquid) at this point !

When connecting, always pay attention to the correct flow direction of the water (liquid), this is indicated on the Venturi nozzle with an arrow printed on it.

The technical data of the Venturi nozzle are as follows:

Length:	153 mm
Ozone (air) connection:	1/4 inch
Water connection:	3/4 inch

**Connection example****Instructions for use:****1. Commissioning**

Observe the safety instructions !

First of all, choose a well-suited installation position for your water-ozone generator. The following factors are important for this:

- The unit must have a secure stand
- The operating area should be dust-free and as dry as possible. (In any case below 65% r.l.)
- Make sure that the ozone generator is always placed high enough above the water surface if you are feeding ozone into a basin (vessel)! Ideally, we recommend a distance of about one metre above the surface.
- If the ozone is integrated into a watercourse by means of a venturi nozzle, make sure at all times that all connections are properly connected and that no water (no liquid) can get into the ozone unit !

Insert the mains plug properly into the socket.

Switch the ozone generator ON with the operating switch. The red light of the operating light indicates that the water ozone generator is switched on and air (ozone) is flowing out of the ozone outlet at the front.

Now

select/adjust the ozone strength with the stepless ozone regulator. To do this, turn the control clockwise to increase the ozone output. When the controller is turned all the way up, this corresponds to full operation and 100% ozone output.

To reduce the ozone output, turn the knob anti-clockwise. When the knob is turned all the way closed, no more ozone is produced and clean air flows out of the ozone outlet.

Make sure that the venturi nozzle is never fed dry with ozone / air, but establish a water flow through the venturi line, otherwise the venturi nozzle could be damaged and the ozone generator cannot discharge the ozone either !

Do not switch the ozone generator on/off in short intervals, but always wait approx. 5 minutes before switching it on again.

## 2. During operation

Make sure that you and third parties are not exposed to ozone gas. If you notice an ozone smell during operation of the unit, please switch off the ozone unit immediately and check the pipes and the proper functioning of the unit.

## 3. After completion of ozonisation

First check whether the unit is also no longer producing ozone, switch it off completely and if it is in off mode for a longer period of time, please pull the mains plug.

Please note that ozone has a half-life of approx. 20 minutes. If ozone has been added to the air indirectly via the water, we also recommend that you do not enter this area for approx. 30 - 45 minutes after ozonisation has ended !

If room air has been ozonised directly or indirectly, make sure that the room/object is sufficiently ventilated with fresh air from outside. In this context, we recommend that you ventilate the room for approx. 20 minutes before people or animals enter the room again!

If the ozonised room cannot be ventilated with fresh air from outside (e.g. due to its construction) and the ozone treatment phase lasted longer than 80 minutes, we recommend that humans and animals do not stay in this room for approx. 60 minutes. In case of a room air ozonisation longer than 400 minutes, we recommend no stay of humans and animals in this room for the duration of approx. 2 hours.

## 4. Cleaning

Only clean the housing !

- Please disconnect the mains plug before cleaning the water-ozone generator.
- Only use mild cleaning agents to clean your water-ozone generator.
- NEVER spray your water ozone generator (e.g. with water or similar).

### Technical data

<b>Model designation:</b>	WDH-WP15
<b>Voltage:</b>	220-240V ~ 50Hz
<b>Maximum power consumption:</b>	80 W (0.4 A)
<b>Ozone output (optimal):</b>	1,500 mg/h (1.5 g/h)
<b>Max. Ozone concentration:</b>	15-20 mg/l
<b>Max. Outlet pressure:</b>	10 PSI
<b>Waterproofness:</b>	IPx0
<b>Dimension (H/W/D):</b>	240 x 180 x 420 mm
<b>Weight:</b>	5.6 kg
<b>Application range:</b>	5°C - 40°C

### Other

#### Warranty statement:

Notwithstanding the statutory warranty claims, the manufacturer grants a warranty in accordance with the laws of your country, but at least 1 year (in Germany 2 years for private individuals). The warranty begins on the date of sale of the appliance to the end user.

The guarantee only covers defects that are due to material or manufacturing faults.

Warranty repairs may only be carried out by an authorised customer service. To make a warranty claim, please enclose the original sales receipt (with date of sale).

Excluded from the guarantee are:

- Normal wear
- Improper applications, such as overloading the appliance or non-approved accessories.
- Damage due to external influences, use of force or foreign objects
- Damage caused by non-observance of the operating instructions, e.g. connection to an incorrect mains voltage or non-observance of the assembly instructions.
- Completely or partially dismantled units

## Conformity:

The ozone generator has been tested and itself and/or parts thereof have been manufactured under the following (safety) standards:

### **CE (LVD) conformity and EMC conformity, of course.**

CE (LVD) Conformity tested according to: EN 60335-1:2012+AC:2014+A11:2014+A13:2017+A1:2019  
+A14:2019+A2:2019  
EN 60335-2-65:2003+A1:2008+A11:2012  
EN 62233:2008+AC:2008

EMC conformity tested according to: EN 55014-1:2017  
EN 55014-2:2015  
EN 61000-3-2:2019  
EN 61000-3-3:2013+A1:2019

### **Correct disposal of this product:**



Within the EU, this symbol indicates that this product should not be disposed of with household waste. Waste equipment contains valuable recyclable materials that should be recycled. Furthermore, the environment or human health should not be polluted by uncontrolled waste disposal. Therefore, please dispose of old appliances via suitable collection systems or send the appliance for disposal to the place where you bought it. They will then recycle the appliance.

We hope you enjoy using this device:

***Your Aktobis AG***

***Keep these instructions for use in a safe place !***

