

ActivTapp™

ACTIVATED OXYGEN FAUCET



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What is *ActivTapp*™

Two Models

3 Way Faucet



❖ Primary Kitchen Faucet that Delivers;

- Traditional Hot Water
- Traditional Cold Water
- Activated-Oxygen Water (ozone)

Side Spray Faucet



❖ Secondary kitchen Faucet Delivers;

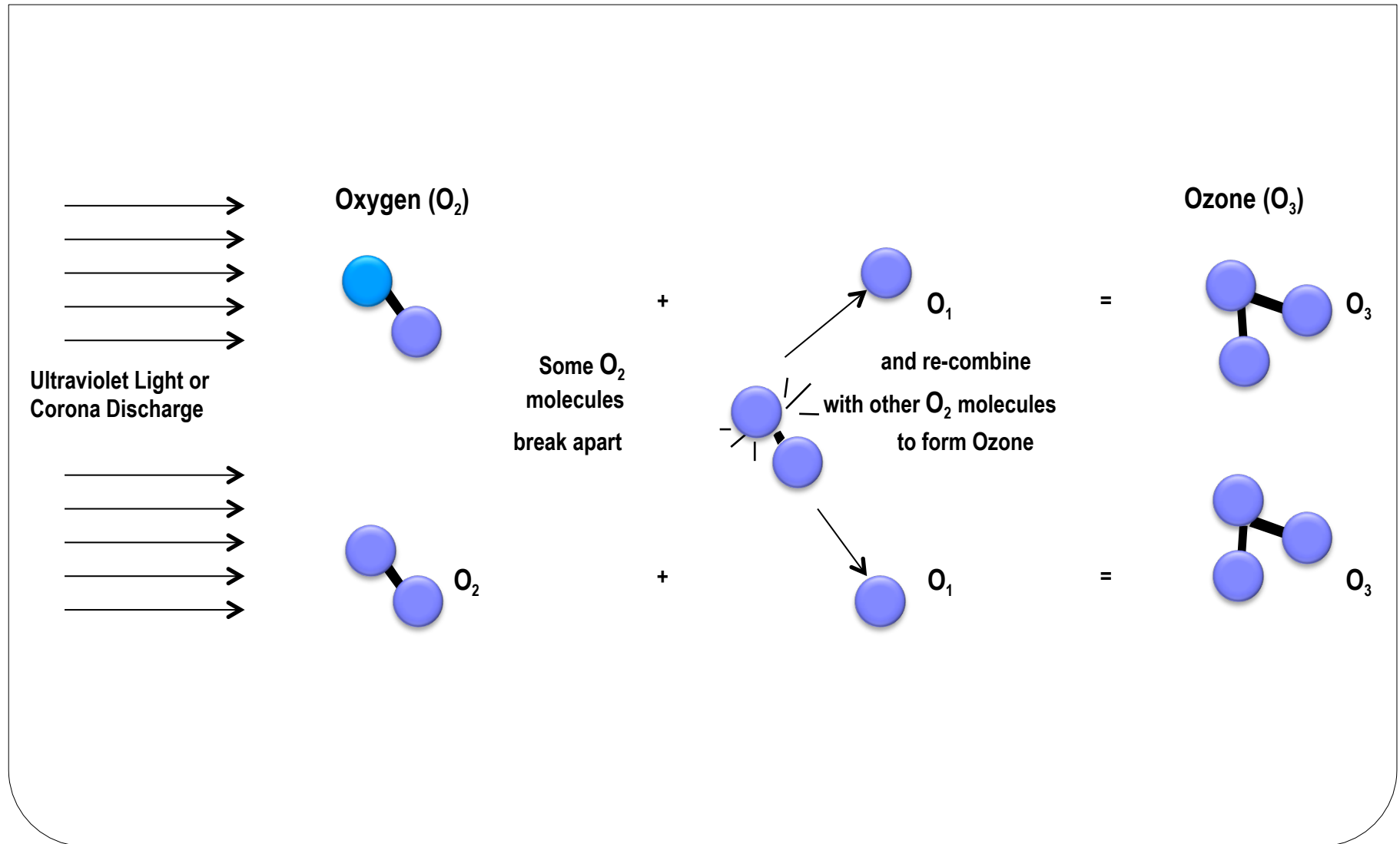
- Activated-Oxygen Water (ozone)

What is Activated-Oxygen

- ❖ Activated-Oxygen is also known as, Ozone.
- ❖ Ozone is the planets strongest oxidizer and disinfectant readily available for commercial use
- ❖ Ozone is 3,000 times faster acting and more effective than is chlorine in killing bacteria and viruses
- ❖ Ozone leaves behind no residues, off flavors or tastes, and its only by-product is oxygen
- ❖ Ozone is generated on-site, and does not require storage of chemicals
- ❖ 100% Chemical free and “Organic” certified



How Is Ozone Created



Uses of Ozone

- ❖ Ozone has been used in many water treatment applications for over 100-years



Bottled Water – Must be filled with ozonated water

Well and Surface Water – Used by public drinking water supplies throughout the world



Commercial Pools – Olympics pool must use ozone for disinfection and oxidation



Food Processing – Used by many fruit, vegetable producers, and ready-to-eat (RTE) food packers



Hydro-poniocs – provides clean water to promote healthy growth

Uses of Ozone

- ❖ Ozone has been used in many water treatment applications for over 100-years

Commercial and Residential Laundry –
to reduce water, chemicals, and hot-water



Wineries and Breweries – Used to disinfect
barrels takes and other equipment



Residential Pools – Used to reduce chlorine and other
standard sanitation methods



ActivTapp Disinfection

❖ A 10-second rinse with ActivTapp can provide*

- Kill 99.99% of bacteria and viruses on contact
 - E.coli
 - Clean Multi Food Surfaces
 - Fresh Fruit, Salads and Vegetables, Sea Food, Meats
- Keep produce and food ingredients fresh
 - Up to three times longer, by destroying bacteria and viruses that cause spoilage
- Remove agricultural chemical residues
- Remove chlorine residues and its unpleasant taste from tap water.
- Eliminate the use of hot water and conventional sanitizers, saving on daily operational costs

* 99.99% kill is obtained at 9µg/l of ozone for 10-seconds of contact time, with a water temperature of 12°C. USEPA Guidance Manual, Alternative Disinfectants and Oxidants, 1999.



Ozone and the USDA and FDA

- ❖ 1997: EPRI panel declares ozone GRAS (Generally Regarded As Safe) as a food additive
- ❖ 2001: FDA approves ozone as anti-microbial agent for food contact
- ❖ 2001: USDA/FSIS approves ozone for meat and poultry, including ready-to-eat meat and poultry products
- ❖ 2001: The use of ozone as an anti-microbial agent for direct contact with foods, including meats and poultry has been approved by the FDA
- ❖ 2001: The FDA released this final ruling in response to an Electric Power Research Institute (EPRI) food additive petition, amending previous regulations and granting regulatory acceptance of ozone as a food additive.



Benefits of ActivTapp



ActivTapp™
ACTIVATED OXYGEN FAUCET

Uses of ActivTapp



- ❖ Disinfect your hands or kitchen utensils to kill common germs, bacteria, and viruses
- ❖ Rinse produce from the store before placing into the refrigerator will extend shelf life, without altering the taste of food

- ❖ Neutralise and eliminate pesticides

- ❖ Prolong the life of plants and cut flowers

- ❖ Surface Disinfection in the kitchen

- Counters
- Cutting boards
- Sinks

- ❖ Soak sponges and wash-clothes in ozonated water to rid them of mildew smells



Ozone water is nature's natural way for disinfecting all it touches, and in 10 seconds not only kills bacteria, removes pesticides and eliminates odors

Sounds too good to be true





Independent Bacteria Testing

About the four key pathogens

Clostridium difficile, *Escherichia coli* (E. coli), *Salmonella typhimurium* and *Staphylococcus aureus* are four key pathogens that produce toxins, which cause illness in mankind. These bacteria are commonly known to cause diarrhoea and food poisoning symptoms among other afflictions.

These pathogens can be spread from person to person due to poor hygiene, improper washing of hands after visiting the toilet, or the consumption of contaminated food and water. Coming in contact with infected animals is also another cause. Some bacteria can also contaminate their surroundings, such as toilets, bedclothes, skin and clothing.

For commercial premises that deal with food preparation, healthcare, children and even pets, it is imperative that the threats posed by pathogens such as these are neutralised and eliminated.

Test Result :

Test Item	Unit	Before processing	After processing	Elimination ratio(%)
Coliform	CFU/mL	3.6×10^3	<5	>99.9
<i>Escherichia coli</i>	CFU/mL	4.7×10^3	<5	>99.9
Total Plate Count	CFU/mL	8.8×10^3	<5	>99.9
<i>Staphylococcus aureus</i>	CFU/mL	4.0×10^5	<5	>99.9
<i>Pseudomonas Aeruginosa</i>	CFU/mL	5.1×10^5	<5	>99.9
<i>Candida albicans</i>	CFU/mL	3.3×10^4	<5	>99.9
<i>Legionella pneumophila</i>	CFU/mL	8.6×10^5	<5	>99.9



Independent Pesticide Testing

A spoon cabbage specimen was tested for trace amount of pesticides that are commonly used in conventional vegetable farming.

The same test was carried out again – this time, after the same spoon cabbage has been washed under our ozone water for 30 seconds.

Test results conducted by SGS show that 99.9% of the four pesticides detected earlier *Chlorpyrifos*, *Dimethomorph*, *Pencycuron*, and *Quinoxifen* were removed after washing under our ozone water for 30 seconds.

Before washing

<u>Test Item</u>	<u>Test Results</u> ppm(mg/kg)	<u>Detection Limit</u> ppm(mg/kg)
Chlorpyrifos	12.12	0.01
Dimethomorph	6.66	0.01
Pencycuron	2.38	0.01
Quinoxifen	0.03	0.01

After washing

<u>Test Item</u>	<u>Test Results</u> ppm(mg/kg)	<u>Detection Limit</u> ppm(mg/kg)
Chlorpyrifos	0.01	0.01



Independent Surface Testing for Food Safety

Test Report

Report Date: 20 November 2011

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Sample Details:

- Client Description: MICROBIOLOGICAL SWAB
- Site: 101-1015
- Place: PREPAREDATION TABLE 1001
- Date tested: 20/11/2011

Test Results:

Enumeration	Result	Units	Test Method
Total Viable Count @ 30°C	< 1	per 100 sq	FM9702
Acidfastness	< 1	per 100 sq	FM9702
E. coli	< 1	per 100 sq	FM9702

Signature: *G. Morris*
Name: G. Morris
Title: Microbiologist Food Laboratory

For the test, some raw meat, seafood and vegetables were rubbed onto a chopping board and then left for bacteria to form. A first swap was then taken from the chopping board surface filled with bacteria.

The chopping board was then cleaned with an approved chemical disinfectant before taking a second swap. The results would show satisfactory kill rate of bacteria between the first and the second swap.

The same test was repeated, this time using the ozone water from ActivTapp as the cleaning agent instead of chemical disinfectant.

In both tests, the results were satisfactory.

The implication here is that restaurants and eateries can safely use our ozone water to perform the same function as chemical disinfectants. Not only would these establishments save money, but they would also use less chemicals, contributing to a friendlier environment.



Independent Ozone Overspill Testing

TEST REPORT

Received Date : Oct. 06, 2012
Report Number : PLS0120001
Report Date : Oct. 06, 2012
The Number of Page : 1 OF 1

Following test sample is provided and confirmed by Client :

Product Name : Home ActivTapp® faucet concentration test
Model/Type : #
Sample Number : PL0001
Test Item and Method : Performance Test

1. CHG/MS of the reference of this test
2. The AIB-B410000000 was set up at 1.5m x 1.5m x 2.5m approximately of test room.
3. Sampling the ozone concentration which shall be performed in a distance of 30 cm from the AIB-B410000000 and continuously for 30 minutes.
(Detection range : 0.1 ~ 500 ppm, measurement : 1 minute)

Result :

Time (min)	Concentration (ppm)	Time (min)	Concentration (ppm)	Time (min)	Concentration (ppm)
1	0.002	11	0.003	21	0.003
2	0.002	12	0.003	22	0.003
3	0.003	13	0.002	23	0.003
4	0.003	14	0.003	24	0.003
5	0.003	15	0.003	25	0.003
6	0.003	16	0.003	26	0.003
7	0.003	17	0.003	27	0.002
8	0.003	18	0.003	28	0.003
9	0.002	19	0.003	29	0.003
10	0.003	20	0.002	30	0.002

Average of 30 tests : 0.003 ppm

Remark :

1. This report is for reference, not for advertisement or publication.
2. Sample and title of test report are provided by the client. Environment Lab is only responsible for testing and analyzing.
3. Test results are valid only for test samples.
4. The test documents cannot be reproduced in any way, except in full content, without the prior approval in writing of the laboratory.
5. If there are any discrepancies between the English and Chinese report, the Chinese version shall prevail.
6. The client owns the product or trademark of the examination, belonging to the client, and has already got the ownership person's authorization.

The FDA rule basically states that the maximum acceptable level of ozone gas spillage from any ozone generating device should not exceed 0.05 part per million (ppm) by volume of air in the atmosphere of enclosed space intended to be occupied by people for extended periods of time, e.g., commercial kitchens, bars, restaurants medical clinics, hospitals.

The ActivTapp System has been independently tested as such by SGS International Testing Laboratories and the testing results show an average spillage of 0.003ppm – well below the safety guidelines set by the FDA. To put this in perspective, the overspill of 0.003ppm from our ozone system amounts to only 6% of maximum allowable limit.

RESULT

TIME (MIN)	CONCENTRATION (PPM)	TIME (MIN)	CONCENTRATION (PPM)	TIME (MIN)	CONCENTRATION (PPM)
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4	0.003	14	0.003	24	0.003
5	0.003	15	0.003	25	0.003
6	0.003	16	0.003	26	0.003
7	0.003	17	0.003	27	0.002
8	0.003	18	0.003	28	0.003
9	0.002	19	0.003	29	0.003
10	0.003	20	0.002	30	0.002

Average = 0.003ppm

Independent Water and Electrical Approval



National Sanitation Foundation (NSF) of the USA is one of the most highly regarded authorities on sanitary plumbing products. The ActivTapp systems are approved and certified in compliance with NSF/ANSI 61 (an NSF certification scheme), which ensures that the entire system including all its components will not pose any adverse health effects.



The ActivTapp faucets are certified under AB1953 (California Assembly Bill 1953), specifying its lead content level is below 0.25%, therefore it is able to deliver water that is safe for human consumption.

The cUPC Mark was developed in response to an industry request of a uniform code for testing plumbing supply fittings that would be acceptable in both Canada and the USA. The ActivTapp faucets are cUPC certified, therefore they are allowed for sale in both Canada and the USA.



The ActivTapp systems are fully compliant with the CE marking for Low Voltage Directive (LVD) and Electromagnetic Compatibility Directive (EMC) in the European Economic Area (EEA). The LVD ensures that the electrical component will be used safely for its intended applications. The EMC requires that products must not emit unwanted electromagnetic pollution (interference) that might disturb radio and telecommunication as well as other equipment.

Other Approvals and Certifications



WaterMark

Australia and New Zealand



UK and Northern Ireland

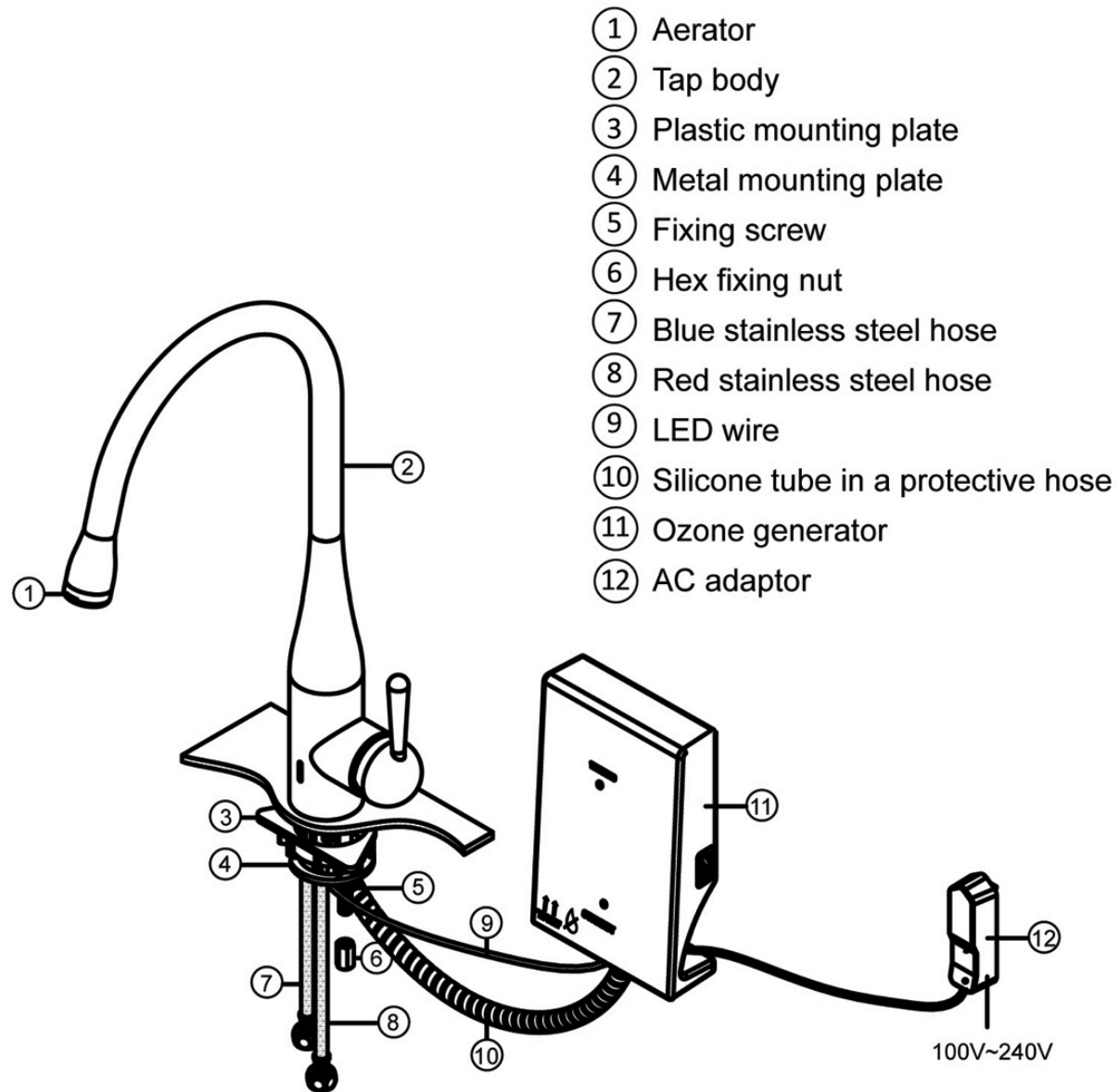
Germany

KTW-DVGW

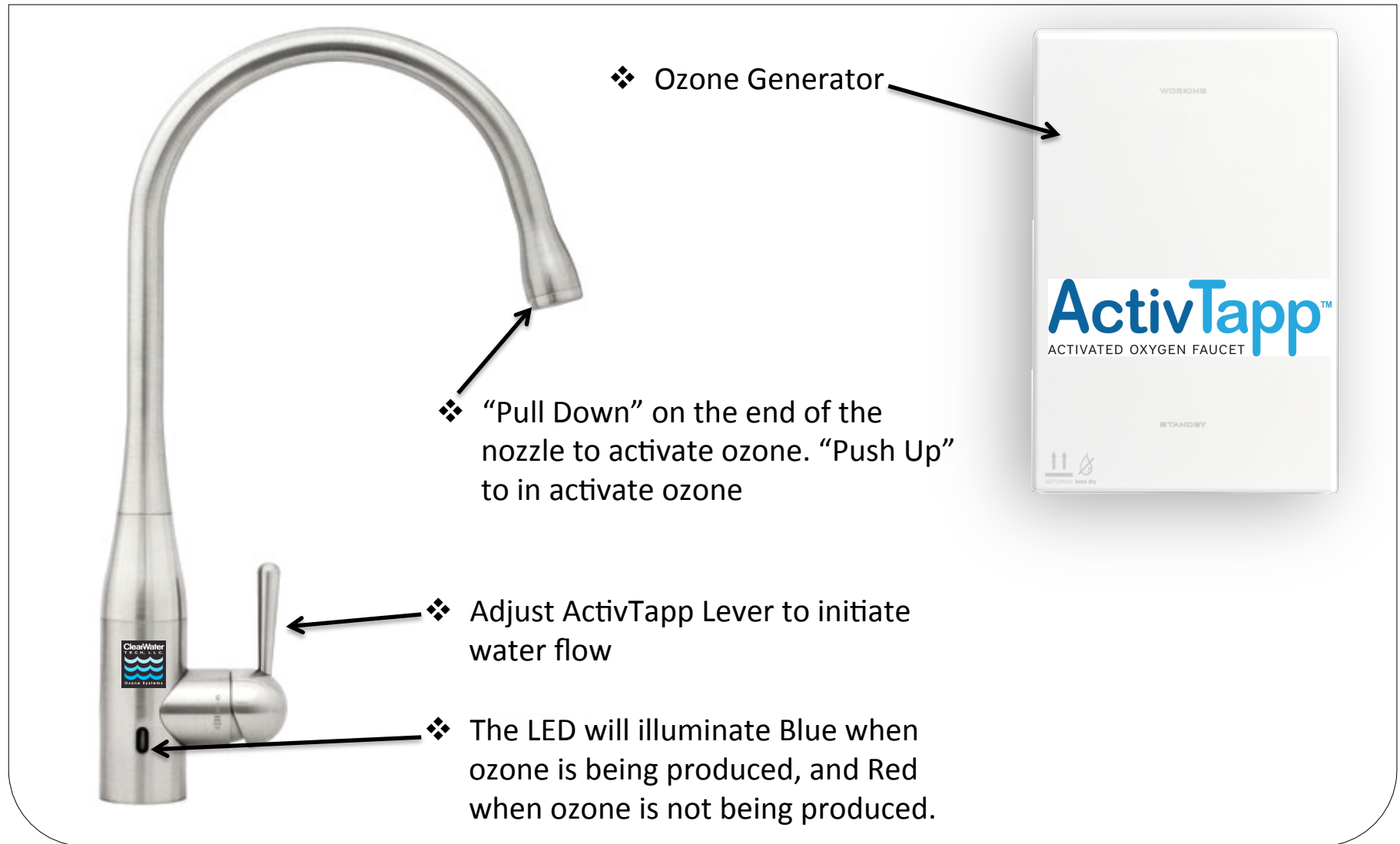
France



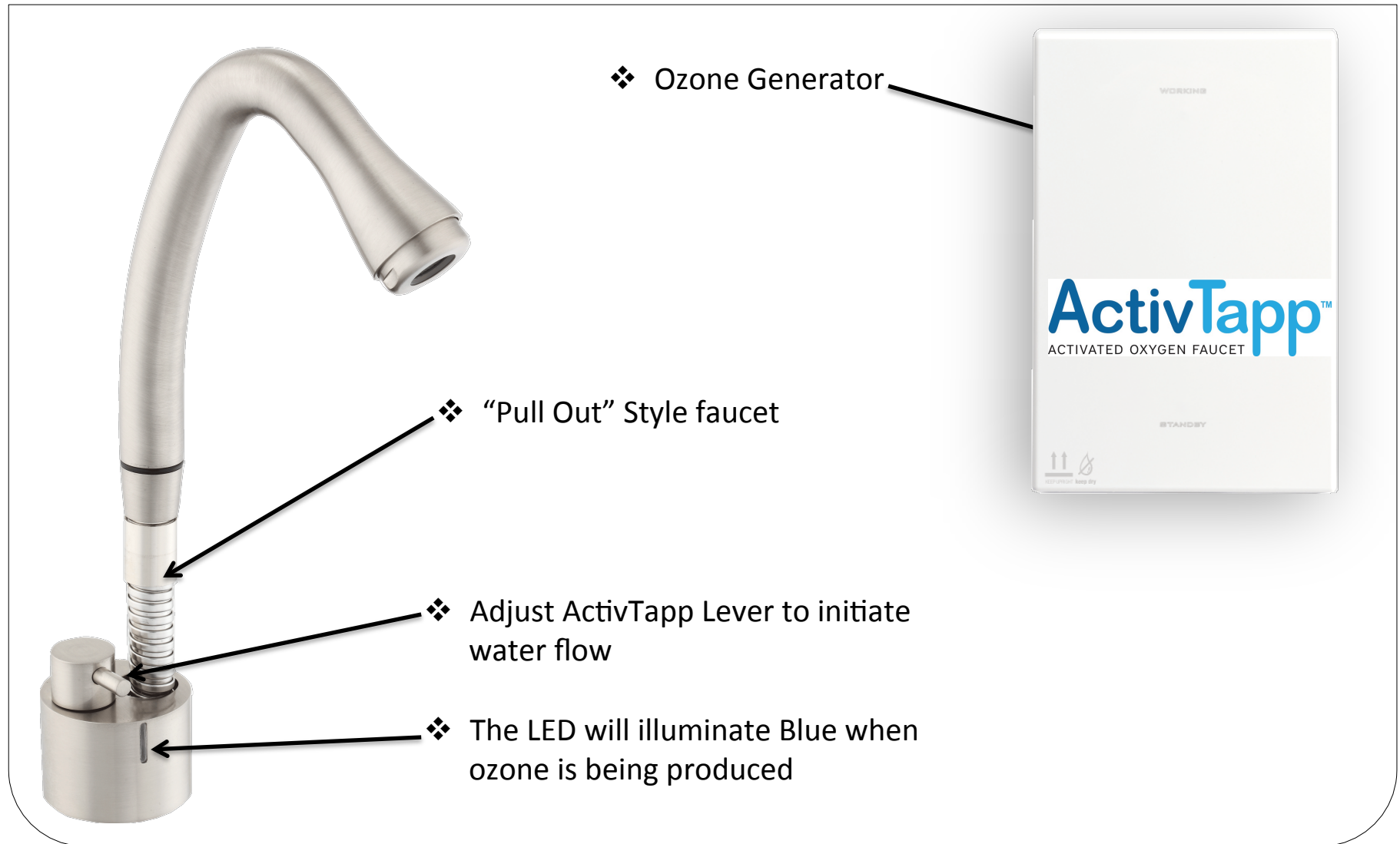
ActivTapp Components



How ActivTapp Works – 3-Way Kitchen Faucet



How ActivTapp Works – Side Spray Faucet



The One-Stop Ozone Faucet



ActivTapp™
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The Ozone Faucet Product Range In-situ





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