

in.zone

innovative corona discharge ozonator



TechBook

All the natural purifying benefits of ozone
for the water of spas and hot tubs.





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Warnings! Important safety instructions

- Read and follow this manual carefully and make sure to save it for later.
- This manual contains important information on in.zone's installation, use and safety recommendations. It is your responsibility to install and use your in.zone safely.
- Do not use in.zone if it is not connected to the spa system (venturi) ; do not directly inhale ozone coming from in.zone. Ozone can cause serious problems to your health.
- Do not install in.zone outside of the spa equipment compartment; it should be installed behind the spa skirt or panel and protected against rain, sun, water hose or sprinkler, snow and other outside elements.
- Install in.zone above water level or as high as possible (as close to water level as possible). Also install a check valve and make an Hartford loop.
- In.zone must be installed out of the bather's reach.
- Make sure no water can get inside in.zone's enclosure. A check-valve must be installed between the injection point and in.zone.
- Make sure a sufficient vacuum allows ozone to be injected in water.

- If in.zone is used indoors, it must be in a ventilated room.
- Follow all electrical codes required for this type of installation and make sure all electrical connections are made by a qualified electrician.
- Use only electrical cord in good condition to power in.zone.
- In.zone must be connected to a circuit protected by a ground fault interrupter (GFCI).
- Make sure all electrical power is off before installing or servicing in.zone.
- If in.zone electrical connections are going through the spa system control, it is important that this control be protected by a GFCI.
- In.zone should be activated only when a pump creates a sufficient air vacuum.
- Never service an in.zone if you are wet.
- Do not open the unit; there is no serviceable parts inside.
- **Disposal of the product:** the in.zone must be disposed of separately in accordance with the local waste disposal legislation in force.





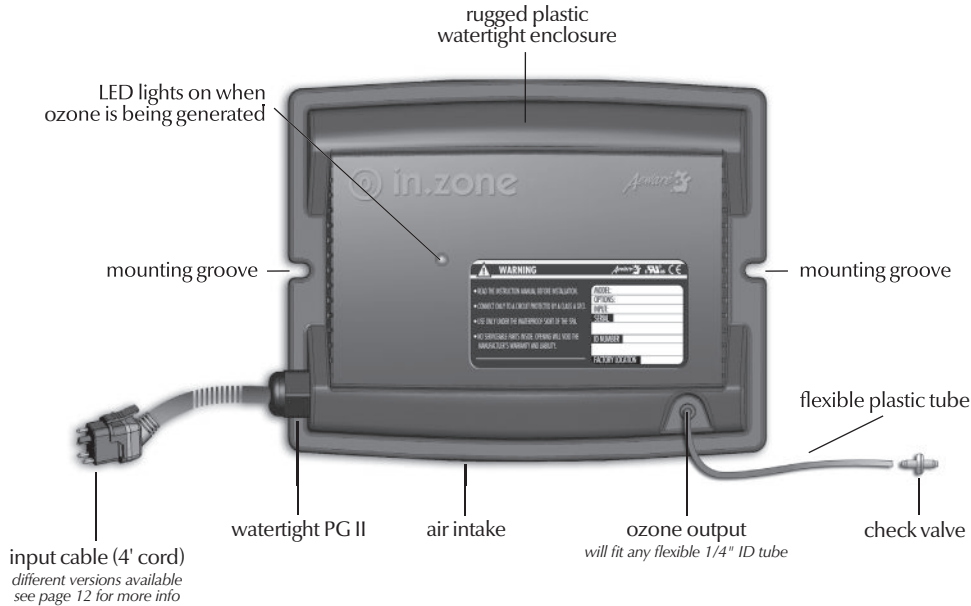
in.zone

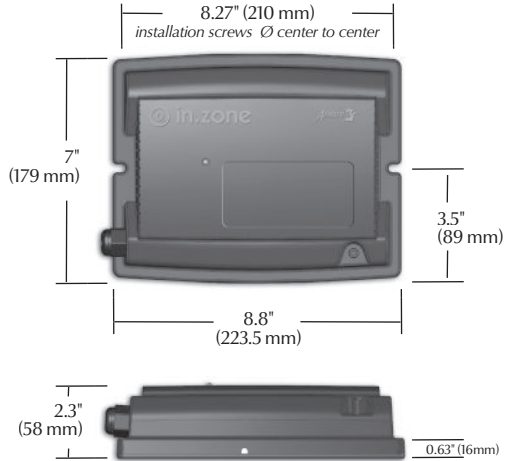
Sleek designed and reliable corona discharge ozone generator developed for spa and hot tub manufacturers.

Our new in.zone uses a corona discharge tube to produce a constant concentration of ozone.

With its waterproof enclosure, its sleek and beautiful design, a life span of 20,000 hrs and no need for chip replacement, in.zone is the safest, most reliable and durable ozone generator offered to the spa and hot tub industry.

In.zone can be installed flat or wall-mounted horizontally or vertically. It comes with a check valve and a 10' tube to inject ozone in your spa system.



Dimensions:**General:**

- Universal input: 108V to 250V, 50Hz to 60Hz
- Power: 14 Watts
- Amperage: 120mA at 120V, 60mA at 240V
- Watertight enclosure
- UL and CE approved
- Includes a check valve and 10' flexible plastic tube
- Life span of 20,000 hrs (under normal conditions)

Ozone generation:

- Maximum output: 400 mg/hr
- Output with airflow of 0.14 CFM: 300mg/hr
- Output with airflow of 0.05 CFM: 100mg/hr



Ozone in a spa!

Ozone is a natural purifier. It is a strong cleaning agent. As it reacts with organics, it oxidizes unpleasant odors, reduces germs, bacteria and viruses. Combined with a spa sanitizer, in.zone enhances the quality of the water. Its contribution to the filtering and sanitizing processes results not only in cleaner and clearer water but in shorter maintenance time and minimized chemical use and costs, about 30 to 50% less chlorine and bromine.

For the spa user, in.zone really means better quality of water which translates into less irritated eyes, less dry skin sensation, reduced lines and foaming in water and more enjoyment of their spa.

Effects of ozone

- Ozone reduces bacteria, eliminates spores, yeast, and fungus and inactivates viruses and cysts.
- Ozone oxidizes and destroys oils and other contaminants in water.
- Ozone is pH neutral. It adds no contaminants.
- Ozone leaves no unpleasant chemical taste or smell.
- Ozone does not affect the pH balance of water like traditional chemical treatment methods.

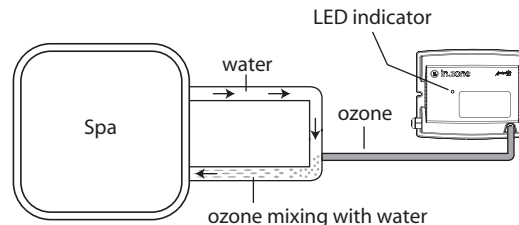
Table info from various web sites on ozone and spa.

How in.zone works!

In.zone's corona discharge generates ozone that is injected in the spa water by an air suction effect. The generated ozone travels from in.zone through its flexible plastic tube and mixes to the water in the spa plumbing. The longer ozone and water can mix together before entering the spa the better.

To be used at its fullest potential, in.zone should work at least 3 to 4 hours per day, every 12 hours, during the spa filtration cycle. In.zone has a built-in timer that pauses its activity for about 10 minutes on a 30 minute cycle. This delay is the perfect time to let the ozone perform its cleaning task in the water.

In.zone LED indicator lights up when ozone is being generated.





Installation schemes

The following material is recommended:

Two (2) # 10 screws of appropriate length with round, truss or pan head and two (2) washers 1/2 OD x 1/16" thickness.



To install in.zone:

Select the most appropriate location on the floor or the wall (recommended) and firmly attach in.zone to a wooden base with (2) screws backed by (2) washers.



Note: If you choose to install in.zone on the floor or close to the floor (not recommended), it must be installed at least 4" above potential flood level. If floor is on ground level, in.zone should be raised at least 4".



Warnings and important notes

Important: Please note that **countersunk** screws should **not** be used as they can damage in.zone base.



Attention: In.zone air intake should not be pointing up; it should either point down or to the side to prevent water infiltration.

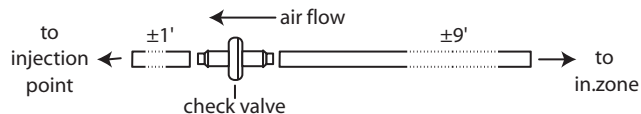
Warning: Beware of some products commonly used against corrosion (such as WD-40 family products). Their use, due to negative chemical reactions between some industrial oils and plastic, could damage in.zone's plastic enclosure. Any other materials which may come in contact with its enclosure must be carefully evaluated for compatibility.



Check valve installation:

Each in.zone comes with a 10' 1/4" ID flexible plastic tube and a check valve.

- 1- Cut the tube at about 1' from the injection point.
- 2- Connect the two sections of the tube on each side of the check valve (you can add a tie rap on each side of the check valve to solidify the connection).



Attention!

The check valve must allow air to flow from in.zone to the injection point and prevent water from coming back to in.zone. If needed, blow into the check valve before you install it to make sure you are installing it the right position.

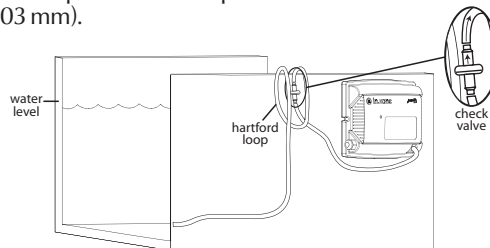
You may have one of the following check valves:



- Check valve 1: an arrow shows the airflow direction; the arrow should point to the spa.

- Check valve 2: grey side of the check valve should face the spa side since the air flow is coming from the clear (transparent) side of the check valve towards the grey side.

- 3- Connect the shortest part of the tube on the in.zone outlet with the check valve at the other end. (Refer to injection section, pages 9 - 10)
- 4- As a second protection against water infiltration, it is required to perform an Hartford loop installation with in.zone's plastic tube. Take the 10' flexible plastic tube, make two loops as illustrated and secure it above water level. If it is not possible to place the loops higher than water level, secure them as high as possible under the spa skirt. The loop(s) must have a diameter of at least 8" (203 mm).



- 5- Connect the longest side of the tube to the injection point, just push the tube on the ozone outlet of in.zone. (You can add a tie wrap to solidify.)



Ozone injection system

Ozone ready spa: Follow the manufacturer's instructions to install in.zone on an ozone ready spa.

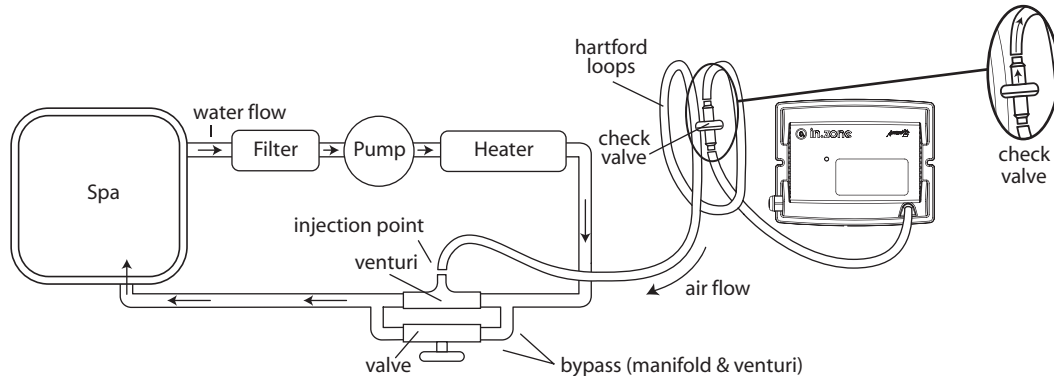
Non ozone ready spa:

- A- **To install with an injection manifold (bypass)**
 * *Manifold and Venturi can be purchased at spa dealers stores.*
- A1- Follow the safety instructions listed at the beginning of this manual.
- A2- Cut a section of 1 1/2" plumbing after the filter, pump and heater. You should install the manifold (bypass) as far as possible from the spa tub. The longer the tube is between the

bypass and the spa the better because it gives time and space to ozone to mix with water. We recommend to have at least 10' of tubing between the injection point and the spa tub.

⚠ Attention: It is important that ozone do not pass through the heater or filter

- A3- Install the injector manifold with a bypass purchased at a spa dealer store (the kit should include the venturi).
- A4- Connect in.zone so you are sure it will be activated when pump is working and at its lowest speed (if it is a 2 speed pump).
- A5- Don't forget to perform a suction test before powering up in.zone (refer to suction test page 11).



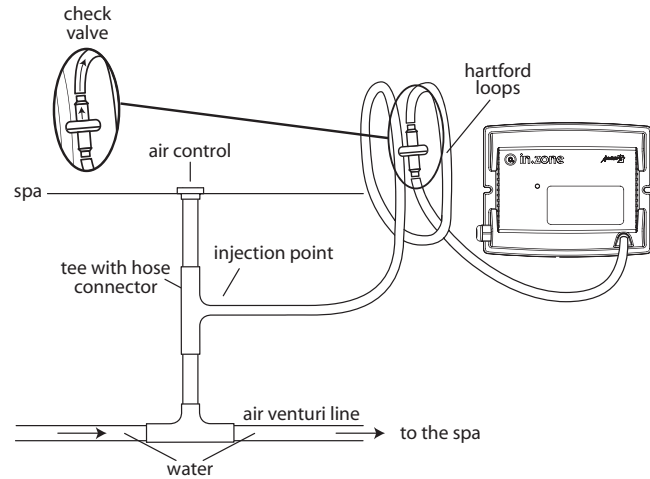


Ozone injection system

B- To install with an air control injector:

This method can be used if the air control valves are closed. Injection point must be installed on the venturi air line of the spa.

- B1-** Follow the safety instructions listed at the beginning of this manual.
- B2-** Select the venturi line with the best suction and select a location for the injection point that will lead to the lowest spa jet in the spa.
- B3-** Cut the air control tube.
- B4-** Install a tee with a hose connector (tee with hose connector and other fitting can be purchased at your spa dealer store). Use all material needed to make sure your 1/4" ID flexible tube will be installed safely.
- B5-** Connect in.zone so you are sure it will only be activated when a suction effect is created by the circulation pump.
- B6-** Don't forget to perform a suction test before powering up in.zone (refer to suction test page 11).





Warnings!

- Do not power in.zone if it is not connected to a running injection system; ozone can be harmful to your health if inhaled.
- It is better not to smell ozone at the water surface; if you can smell ozone, it is recommended to review the injection system.
- To improve the contact between water and ozone, lengthen the mixing time of ozone and water by using a longer tube after the injection point or by reducing the air flow (vacuum) that sucks ozone in the water. A static mixer can also be added in the water tube after the injection point to improve the contact between water and ozone. (Search for static mixers at www.coleparmer.com)

Suction test

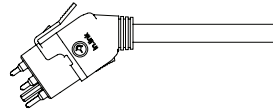
You should do a suction test to make sure you have enough air flow to inject ozone in your spa system.

- 1- Make sure in.zone tube is connected to its check valve and injection point. Remove tube nozzle from in.zone enclosure.
- 2- Make sure your in.zone is not powered and start the pump you plan to use to inject the ozone.
- 3- Take the tube nozzle end and put it on your thumb. You should feel a vacuum effect on your skin and hear a sound when you remove the tube from your thumb.

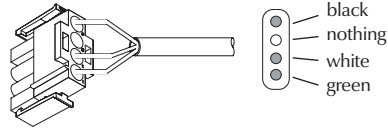


In.zone is available with the following connectors:

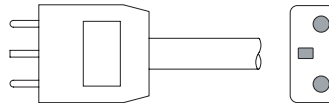
- in.link: 0604-221003 IN.ZONE-IN
with connector in.link



- AMP: 0604-221002 IN.ZONE-AMP



- JJ: 0604-221001 IN.ZONE-JJ
with connector JJ #SS2PSA-103-02



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