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Episode 31 Is Your Filter Getting Enough Ozone in its Diet?

Ozone is a very effective way to supercharge a filter media bed. The most common medias are:

- GreensandPlus™
- Katalox Light®
- Pyrolox® Advantage
- Catalytic Carbon such as Calgon's CENTAUR
- Cerapure™-MAC (not as common as it is just being introduced into the residential market)

To operate properly the pH should be above 6.5, although above 7 is ideal, and the media should be regenerated every 3 days to ensure the catalytic reaction continues.

If you don't have a catalyst, you don't have the fuel to perpetuate the reaction needed to oxidize and filter the contaminant. As you oxidize and reduce, the catalyst is used up. Without regeneration the oxidation potential is gradually used up and the media fails.

The common regenerants are:

- Chlorine
 - Degrades quickly especially if exposed to air and sunlight.
 - Messy can irreversibly damage clothing
 - Difficult to transport
- Hydrogen Peroxide is a very unstable liquid oxygen
 - Degrades quickly
 - Messy, can damage clothing
 - Difficult to transport
- Oxygen -O₂
 - Weak oxidizer
- Ozone – O₃ Trioxygen
 - Powerful oxidizer
 - Gasses off quickly to O₂

Systems

- Systems using chlorine and peroxide require the filter and a chemical feed system.
- Oxygen type systems incorporate a valve which "sucks air". Known as AIO valves they pull in air to provide a continual flow of oxygen as the regenerant. No chemical feed necessary.
- Like AIO systems the ozone generator is incorporated on the valve and operates similarly to a softener valve. Rather than pulling brine to regenerate, a signal is sent to the ozone generator to operate and supply ozone. Air, supercharged with ozone, is used to renew the media.



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AIO valves use the surrounding atmosphere to regenerate. The filter could be in a closet or basement where the air is moldy or moist. We've seen cases where the media bed becomes slimy or moldy.

Ozone is purified air which will keep the bed clean and free of slime.

Considerations when using ozone systems

- Maintenance of the ozone filter is annual, not continual like chemical feed systems.
 - The corona tube needs to be cleaned using manufacturers' directions.
- pH affects the media bed; the ozone renews the catalyst. The higher the pH of the water the faster the catalytic reaction.
- Regenerate every three days. The ozone system creates an ozone bubble in the top of the filter tank. This bubble needs to be refreshed every three days.
- The drier the air, the stronger the ozone.

Learn more about [Master Fusion Ozone Systems](#)

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