



Electrostatic Particle Ionization Combined with a Filter Wall



Reduce odor emissions from your barn ventilation systems!

Expect to reduce HALF of the dust and 30% of the odor emissions from a typical tunnel-ventilated swine finishing system. Combine this with a natural windbreak system to reduce up to 50% of odor, according to an ISU study. (See page two to view Iowa State University study and other data.)

- * Wall height is 11'; length in 10' increments with two corona lines (special barbed wire) and power supply.
- * Install a typical 101' long EPI Filter Wall in one day with a team of four.
- * Filter wall material has a ten-year life span.
- * Galvanized steel pipe fencing structure is braced back to building endwall.
- * Power supply is very energy efficient. At maximum energy output, energy use is \$0.25/day @ \$0.10/kwh.

How does it reduce dust and odor?

Electrostatic particle ionization (EPI) saturates the target airspace with negative ions and scrubs the air of particulate matter, odors and pathogens to varying degrees.

Surrounding particles in the air with a negative charge brings movable positive ions in the particle to its surface and drives movable negative ions into the core of that particle. Then the particle is as magnetic as it can be. We build a filter wall using a material that accepts and holds a negative charge. Now, the positively-charged particle is attracted to the negatively charged filter material and we scrub the air. **Odors and pathogens travel by attaching to a particle.** When we scrub the particles out, we capture the odors and pathogens riding on them, too. The other side of the equation is the bio-chemical side. If our ions in the air collide with a hydrogen sulfide molecule it will convert that molecule; the same for ammonia and other volatile organic compounds. **What happens is a reduction of the disagreeable odors.** Pathogens (virus and bacteria) are also negatively impacted by those same ions. (No pun intended!)

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