



ODOR CONTROL SYSTEM

What is an Odor?

An odor is defined as a sensation resulting from the reception of a stimulus by the olfactory sensory system. Controlling odors is an important consideration for protecting the environment and our community amenity. Odors can be generated from a vast range of sources including sewage treatment processes and industrial effluents.

Odor Control Technologies

Typical odor emission control applications are the removal of odor from sewage treatment plants & sewage wet waste. Odor related complaints from communities surrounding WWTPs have been increasing for many WWTPs. Here, several emission sources need odor control equipment, e.g. such as pump stations, wet wells, sludge dewatering, manholes, air valve chambers, and sludge trans-shipment operations from silo into trucks. Sewage odor consists of mainly hydrogen sulphide & H₂S is dangerous to be released to the environment. Hydrogen sulphide, the gas, also contains organic sulphur components (mercaptans, hydrocarbons) and ammonia.



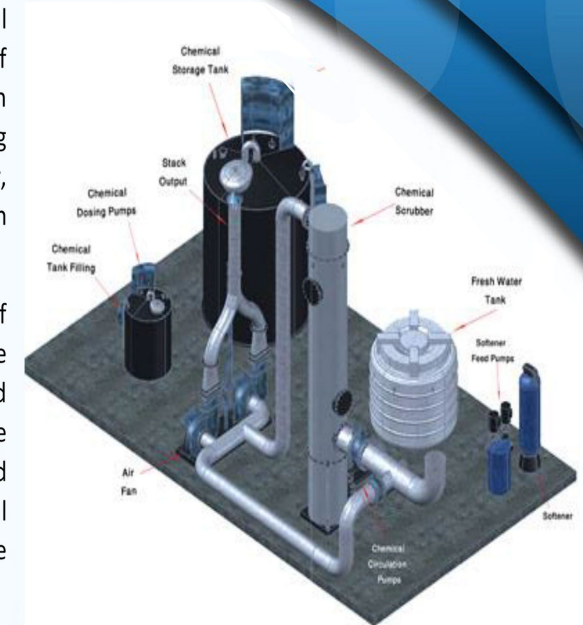
Odor control technologies can be grouped into three distinct categories:

1. Chemical Absorption (acid and caustic wet scrubbing)
2. Biological Oxidation (bio-filtration and bio-scrubbing / bio trickling filtration)
3. Adsorption (activated carbon and other adsorptive medias)

Chemical Absorption:

Chemical scrubbers achieve odor removal by mass transfer absorption via contact of air stream with aqueous solution on random packing material in a scrubbing chamber. The liquid is typically water, adjusted to the proper pH and oxidation potential by chemicals.

Two parameters define the performance of any absorption scrubbing system. These are the efficiency of gas/liquid contact and the adequacy of a chemical within the aqueous phase to promote reaction and absorption. Core Industries uses a special media which increases the efficiency of the scrubber in smaller tower size.

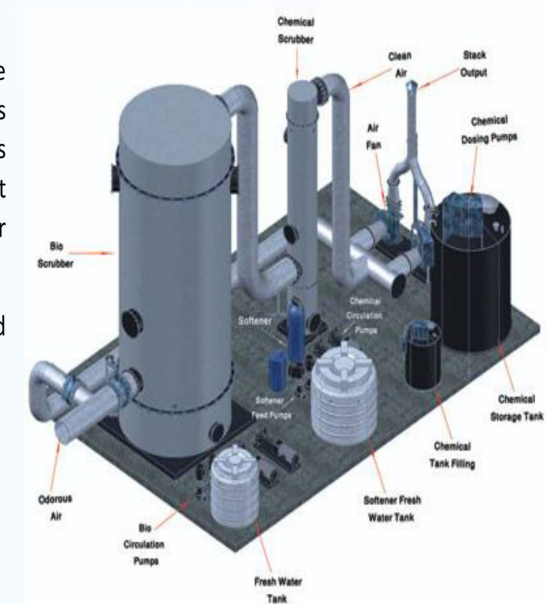


Biological Oxidation:

Biological oxidation is a process by which the bacteria and other types of micro-organisms consume dissolved oxygen and organic substances in wastewater, using the energy released to convert organic carbon into carbon dioxide and cellular materials.

Biological oxidation is broken into two broad categories:

1. Bio-oxidation using inorganic media (bio-scrubbers or bio-trickling filters)
2. Bio-oxidation using organic media (traditionally referred to as biofilters)



Standard Features:

- Polyethylene canister
- Five Media disposable media pouches
- Odor carb Ultra with Media Life Indicator Pellets and Odor mix SP media (5 ft3)
- Totally Enclosed Fan Cooled (TEFC) motor
- Aluminum blower
- Adjustable damper (AL)
- Stainless steel and rubber latches
- Thermoplastic packing and FRP lid
- Fernco flexible coupling at inlet
- Polyethylene inlet (4-inch pipe diameter)
- Airflows up to 100 cfm

Optional Features:

- Passive configuration
- Rain hood
- Mist eliminator
- Silencer

Standard Features:

- Hydrogen sulfide
- Sulfur dioxide
- Ammonia
- Mercaptans
- Aldehydes
- Organic compounds

Other System Advantages:

- System media are UL Classified
- Spent media are landfill disposable
- Maintains superior performance in climates with fluctuating temperature and relative humidity.
- Blue Media Life Indicator Pellets offer a visual indication of remaining media life by changing to white when expired.

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