KCH ENGINEERED SYSTEMS

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# BIOTRICKLING SYSTEMS

**WE CLEAN THE WORLD'S AIR AND WATER**

## BIOLOGICAL OXIDATION TECHNOLOGY

KCH Engineered Systems designs and manufactures a Biotrickling System to remove high levels of $H_2S$ gas and other odors from Municipal and Industrial processes. Our Biotrickling systems will effectively and efficiently remove 99% of $H_2S$ without the use of dangerous chemicals. Instead of chemicals, a simple non-proprietary nutrient is used to promote biological growth on a synthetic media.

## PRODUCT INFORMATION

The standard KCH Biotrickling System, also sometimes called a Bioscrubbing system, is a vertical, countercurrent vessel designed for continuous operation. KCH Biotricklers can also be designed for a rectangular low profile configuration, utilizing a structured high density media.

These systems are constructed of POLYLAST™ or POLYSTRONG™ material, providing structural integrity, UV protection and corrosion resistance required for outdoor installations.

The Biotrickling System can include additional components needed to provide a complete functioning system such as:

- Non-Proprietary Nutrient Systems
- Different Vessel and Media Configurations Based on Application
- Integral Mist Eliminator
- Recirculation Pump
- Fan or Blower
- Ducting
- pH meter
- Integral Sump or Remote Tank for Nutrient Storage
- OSHA Approved Ladders or Platforms

## HOW IT WORKS

Hydrogen sulfide is treated through a biological process which involves recirculating a nutrient rich biologically active solution onto inorganic synthetic media. The media provides a site for biological colonization of microorganisms. The media is specifically designed to prevent the layer of microbes from becoming too thick to limit oxygen saturation throughout the media bed. Fresh water is added to the sump to maintain optimum pH and flush containments and excess biomass from the recirculation solution. Nutrients are stored in a tank then added on a continuous basis via a positive displacement pump.

## APPLICATIONS

- Municipal Waste Treatment Plants
- Pump Stations
- High Level $H_2S$ Applications
- Degasifier or Aerator Off-Gas Odor Control

## BENEFITS

- Low Operating Cost
- Inorganic Media Guaranteed for 10 Years
- Over 99% $H_2S$ Removal Efficiency
- POLYLAST™ or POLYSTRONG™ Vessel Material
  - Maximum Resistance to UV Exposure
  - Exceptional Structural Integrity
- Very Low Maintenance
- Low Empty Bed Retention Time
- Low Water Usage
- Non-Proprietary Nutrient System
- No On-Site Storage of Dangerous Chemicals