



evoqua
WATER TECHNOLOGIES



ODOR CONTROL & CORROSION PROTECTION

DELIVERING TARGETED ODOR CONTROL SOLUTIONS FOR OVER 30 YEARS



Wastewater Treatment Plants

- ✓ LO/PRO® & Poly-Stage™ Scrubbers
- ✓ ZABOCS® Biofilters
- ✓ ZABOCS® BTF (Bio-Trickling Filters)
- ✓ Carbon Adsorbers
- ✓ Midas® OCM (Odor Control Media)
- ✓ Emergency Vapor Scrubber Systems
- Ⓛ BIOXIDE®/BIOXIDE-AQ® Solutions
- Ⓛ ALKAGEN® Solutions
- Ⓛ ODOPHOS® Iron Salts
- Ⓛ Hydrogen Peroxide
- Ⓛ VX-456™ Solutions
- Ⓛ Magnesium Hydroxide



Major Wastewater Collection Systems & Pump Stations

- ✓ LO/PRO® & Poly-Stage™ Scrubbers
- ✓ ZABOCS® Biofilters
- ✓ ZABOCS® BTF (Bio-Trickling Filters)
- ✓ Carbon Adsorbers
- Ⓛ BIOXIDE®/BIOXIDE-AQ® Solutions
- Ⓛ BIOXIDE® AE Solutions
- Ⓛ ODOPHOS® Iron Salts
- Ⓛ VersaDose® Controller
- Ⓛ Hydrogen Peroxide
- Ⓛ ALKAGEN® Solutions
- Ⓛ VAPORLINK® H₂S Monitor
- Ⓛ BIOXIDE® Plus 71

Residential
Community
Collection
Systems/Pump
Stations

EXPERIENCE - EX

VAPOR PHASE ODOR CONTROL EQUIPMENT

Global leaders with over 2000 installations

Chemical Scrubbers:

Use chemicals such as sulfuric acid, caustic soda, and sodium hypochlorite to absorb and react with odors. Multi-stage systems can treat ammonia and sulfide odors in a single scrubber. Patented LO/PRO® system reduces chemical usage by up to 50%. Chemical scrubbers have the highest air flow capacity per footprint.

Biological Systems:

Use sulfur oxidizing bacteria to destroy sulfide odors. Noted for their low operating cost, ease of maintenance and the ability to treat H₂S concentrations in excess of 1000 ppm.

Dry Media Systems:

May use virgin activated carbon for low concentration odors (< 2 ppm), or high capacity Midas media for concentrations up to 20 ppm. They are also used as a polishing stage behind biological or chemical odor control systems.

VAPOR PHASE

- LO/PRO multiple stage chemical scrubbers
- Polystage modular scrubbers
- Emergency chlorine scrubbers
- ZABOCS® biological odor control systems
- BTF Bioscrubber system
- RJMC modular carbon systems
- RJC bulk carbon systems
- Midas high capacity odor control media
- Hybrid combined technology systems for optimal performance

Technology	Total	USA	Int'l
Chemical scrubbers	793	612	181
Biological Odor Control Systems	625	492	133
Activated Carbon & Dry Chemical Scrubbers	597	466	131
Total Installations	2,015	1,570	445



- V Poly-Stage™ Scrubbers
- V Custom Air Strippers
- V Carbon Adsorbers
- V ZABOCS® Biofilters
- L BIOXIDE®/BIOXIDE-AQ® Solutions
- L BIOXIDE® AE Solutions
- L VersaDose® Controller
- L ODOPHOS® Iron Salts
- L ALKAGEN® Solutions
- L Hydrogen Peroxide



Industrial Collection & Treatment Systems

- V LO/PRO® & Poly-Stage™ Scrubbers
- V ZABOCS® Biofilters
- V ZABOCS® BTF (Bio-Trickling Filters)
- V Carbon Adsorbers
- V Fume Scrubbers
- V Emergency Vapor Scrubber Systems
- V Custom Air Pollution Control Systems
- L BIOXIDE® AE Solutions
- L BIOXIDE®/BIOXIDE-AQ® Solutions
- L VersaDose® Controller
- L Hydrogen Peroxide



Potable Water Treatment Plants

- V LO/PRO® & Poly-Stage™ Scrubbers
- V Emergency Vapor Scrubber Systems
- V Carbon Adsorbers
- V Custom Degasifiers
- L Hydrogen Peroxide
- L Millenium III® Chlorine Dioxide Generators

- V VAPOR PHASE
- L LIQUID PHASE

PERTISE - SERVICE

LIQUID PHASE ODOR CONTROL & CORROSION PROTECTION

Comprehensive Solutions From a Single Source

Biochemical Technologies

Evoqua is a leader in the application of products to biochemically prevent and remove hydrogen sulfide. Biochemical options for liquid phase control include the Bioxide®, Bioxide-AQ®, and Bioxide® AE solutions. Biochemical products are not hazardous to transport and store, have long shelf lives, and no impacts to downstream treatment processes.

Chemical Technologies

Evoqua has 30 years of application experience in safely using chemical technologies for odor control. Chemical technologies include the use of iron salts, hydrogen peroxide, and sodium chlorite to control odors generated in wastewater collection and treatment processes. Combination technologies such as ALKAGEN® and VX-456™ solutions offer greater efficiency.

Chemical Storage and Feed Packages

The Evoqua Team offers chemical storage and feed packages tailored to the odor control program. This ranges from simple single pump arrangements to fully automated dose-to-demand systems utilizing the VersaDose® Controller. Advanced control can provide a great savings in dosage and improve performance.

Full Service Odor Control

- Regional Service Centers
- Complete Engineering Staff
- Unmatched Product Offering
- Over 2,500 Installations
- Remote Dosing Control
- Remote H₂S Monitoring

Contact an Odor Control Expert

Liquid Phase: +1 800-345-3982
 municipalservices@evoqua.com

Vapor Phase: +1 858-487-2200
 odorcontrol@evoqua.com

LIQUID PHASE:

Iron Salts

- ODOPHOS® Iron Salts
- ODOPHOS® PLUS Iron Salts

Alkaline

- ALKAGEN® Solutions
- Magnesium Hydroxide

Biochemical

- BIOXIDE Solutions
- BIOXIDE-AQ Solutions
- BIOXIDE AE Solutions
- BIOXIDE Plus 71 Solutions

Oxidizers

- VX-456 Mixed Oxidant Solutions
- Hydrogen Peroxide

Chemical Feed Systems

- Above Ground
- Under Ground
- Turnkey Installation
- VersaDose Controller

Instrumentation

- Remote Monitoring
- H₂S Monitors

ADVANCED TECHNOLOGIES WITH PROVEN RESULTS



KINGSCLIFF WWTP, AUSTRALIA

- BTF-830 Bio-Trickling Scrubber & RJC-800 Activated Carbon Adsorber
- 3,200 CFM
- 99.9% H₂S, 95% Odor Removal
- Headworks at WWTP



INTEGRATED CHEMICAL DOSING CALIFORNIA

Advanced dosing controller integrated with customer SCADA system and telemetry controls a chemical feed system 6 miles upstream of WWTP.



MANATEE COUNTY, FL

- ZABOCS® 42 Biological Odor Control System
- 150 CFM
- 99% H₂S Removal
- Residential sewage lift station



PROVO, WRF, UT

- RJMC Modular Carbon Adsorber
- 500 CFM
- 99% H₂S Removal
- Pump Station



DOHA NORTH P.S. 70, DOHA, QATAR

- LO/PRO® 7090 Packaged Odor Control System & RJC-1512DB Activated Carbon Adsorber
- 22,353 CFM (normal) & 33,333 CFM (peak) per OC Train, 3-Duty/1-Standby OC Trains
- 99.9% Overall H₂S Removal
- Central Pump Station



WASTEWATER TREATMENT & COLLECTION DEPARTMENT, FLORIDA

Evoqua liquid and vapor phase technologies are employed at various sites around the 22 mgd system. Consumer complaints have been effectively eliminated.



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The LO/PRO system is covered by US Patent Nos. 5,876,662 and 6,174,498

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