

Integrated Biotrickling/ Biofilter Systems

Multi-zone Treatment for Odor & VOC Control



For mid-range air flow odor and VOC control applications, Envirogen’s Integrated Biotrickling/Biofilter Systems are some of the most technically advanced solutions available today. The result of 25 years of research, design and operating experience, Integrated Biotrickling/Biofilter Systems combine the high performance of a biotrickling filter in removing hydrogen sulfide (H₂S), with the VOC and reduced sulfur compound efficiencies of a biofilter. Both of these technologies are housed in a single, pre-fabricated fiberglass system that offers ease of installation and a small system footprint.

One of the design advantages of the Integrated Biotrickling/Biofilter System is that it can be configured to offer multiple zones of treatment – for efficient and cost-effective management of complex air streams. Integrated Biotrickling/Biofilter Systems can feature up to three different ‘ecozones’ employing different media, pH, humidity and flow design. This allows the growth of micro-organisms that can target specific contaminants in the air stream – more effectively and efficiently than a single media system can allow. It also allows for optimization of media life – leading to lower long-term operating costs for both energy and media. Integrated Biotrickling/Biofilter Systems consistently remove H₂S to 99+% levels and can remove other compounds in the over 95+% range.

For the control of odors and VOCs, Envirogen Integrated Biotrickling/Biofilter Systems are a very robust sustainable solution, offering:

- Reduced chemical usage/storage
- Contaminant destruction
- Reduced energy usage
- Reduced carbon footprint
- Lower overall emissions
- Adaptation to changing odor sources and levels

Advanced System Design & Construction

Envirogen Integrated Biotrickling/Biofilter Systems feature the latest concepts in odor and VOC control system design – based on our experience of installing over 130 biofilter systems in 90 locations.

Features include:

- External irrigation piping for easy maintenance and inspection of nozzles
- FRP frame and panel construction without metal support structure (no corrosion)
- Zonal irrigation control
- Ease of Installation (modular)
- “Drop and Load” (i.e., drop unit on pad, then load media)
- Overall “box” profile is sleek and clean (as option, exterior shell can be color-matched to WWTP/site architecture)

Integrated Biotrickling/Biofilter Systems Configurations

Model	BTBF-330	BTBF-450	BTBF-650	BTBF-900	BTBF-1100	BTBF-1250	BTBF-1400
CFM	360-660	480-880	680-1245	930-1700	1160-2145	1320-2425	1535-2810

Model	BTBF-1800	BTBF-2000	BTBF-2400	BTBF-2650	BTBF-3000	BTBF-3700	BTBF-4500
CFM	1960-3590	2215-4060	2640-4840	2900-5310	3320-6100	4090-7500	4900-8980

About Envirogen Technologies

Envirogen Technologies is an environmental technology and process solutions provider that combines experience in water and vapor phase treatment with process development expertise, delivering long-term, guaranteed solutions in a broad range of treatment and process-related applications. Today, we provide system design, process engineering, equipment and operating solutions for the treatment of process water, groundwater, wastewater, VOCs & odor as well as materials recovery for a range of industrial and non-industrial customers throughout North America.

The Envirogen Technology Portfolio

Bioreactors	Biofilters	Ion Exchange		Filtration	Phys-Chem	Adsorptive
Fluidized Bed Reactors (FBR)	Built-in-Place (BIP) (High flow)	SimPACK™ (400 gpm+)	FlexSorb™ (5-150 gpm)	Ultrafiltration	Gas Transfer Membrane De-Aeration	Granular Activated Carbon Systems
Membrane Bioreactors (MBR)	B, P, BT/BF, & I-Series (mid-flow)	MinX™ (100-850 gpm)	HyperSorb™ (35-3000+ gpm)	Multimedia Filtration	Deminerlization	Zero Valent Iron
Suspended Carrier Reactors (SCR)	H-Series (low flow)	MinFlex™	Softening	Cartridge and Bag Filters	Disinfection	
	Biotrickling Filters (air) BT-Series	Service Exchange/ Customer Supplied		Reverse Osmosis and Nanofiltration		

Envirogen Biofilter Media

ScorFil™
inorganic, scoria lava

VamFil™
aged bark, engineered

FlexFil™
synthetic structural or random packed media

Other media available

Up to 10-year warranty



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Visit our website www.envirogen.com for more information about the Envirogen Biotrickling Filters and our regional locations.

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