



ENVIROGEN

INTEGRATED BIOTRICKLING  
FILTER & BIOFILTER  
BIOFILTER TECHNOLOGY SYSTEMS  
*(BTBF SERIES)*

# INTEGRATED BIOTRICKLING & BIOFILTER SYSTEMS

## MULTI-ZONE TREATMENT FOR ODOR & VOC CONTROL

Envirogen integrated biotrickling filter and biofilter systems provide some of the most technically advanced solutions for mid-range air flow odor and volatile organic compounds (VOC) control applications. Integrated biotrickling/biofilter systems consistently remove hydrogen sulfide ( $H_2S$ ) to above 99% levels and can remove other compounds in the over 95% range.

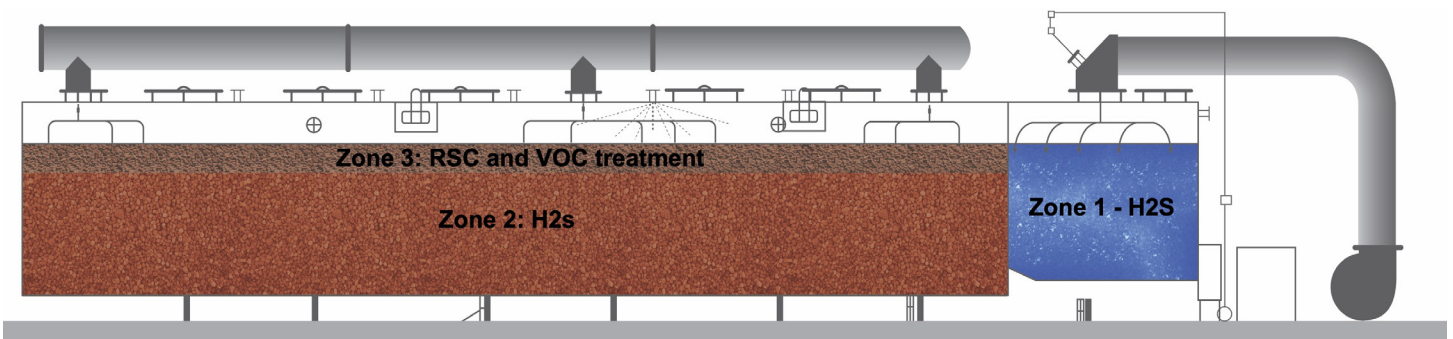
The result of 25 years of research, design and operating experience, these systems combine the high performance of a biotrickling filter design in removing  $H_2S$  with the VOC; and reduced sulfur compound efficiencies of a biofilter. Both are housed in a single, prefabricated fiberglass system that offers ease of installation and small system footprint.



## ADVANCED SYSTEM DESIGN AND CONSTRUCTION

Envirogen biotrickling filter and biofilter technology systems can be configured to offer multiple zones of treatment – for efficient and cost-effective management of complex air streams. Biofilter trickling design is integrated with biofilter system configuration that can feature up to three different 'ecozones' – employing different media, pH, humidity and flow design.

Our advanced odor and VOC control system design allows the growth of micro-organisms that target specific contaminants in the air stream more effectively and efficiently than a single media system can allow. Furthermore, it also allows for optimization of media life and leads to lower long-term operating costs for both energy & media.



Integrated biotrickling filter and biofilter systems offer robust and sustainable solutions for odor and VOC control:

- Reduced chemical usage/storage
- Contaminant destruction
- Reduced energy usage
- Reduced carbon footprint
- Lower overall emissions
- Adaptation to changing odor sources and levels
- Over 130 biofilter technology systems installed at over 90 locations

**KEY FEATURES:**

- 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
- Additional options for the exterior box shell can be color-matched to WWTP/site architecture

**BIOTRICKLING FILTER AND BIOFILTER SYSTEMS**

SERIES/LINE	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
SERIES/LINE	BTBF-1800	BTBF-2000	BTBF-2400	BTBF-26500	BTBF-3000	BTBF-3700	BTBF-45000
CFM	1960-3590	2215-4060	2640-4840	2900-5310	3320-6100	4090-7500	4900-8980

**TAILORED SOLUTIONS FOR YOUR FACILITY**



**INTEGRATED BIOTRICKLING & BIOFILTER SYSTEMS (BTBF)**

Envirogen's biotrickling filter designs and integrated biofilter technology systems are some of the most technically advanced solutions for low- to moderate-flow applications available. These systems combine the high performance of a biotrickling filter in removing H<sub>2</sub>S, with the VOC and reduced sulfur compound efficiencies of a biofilter in a single, prefabricated fiberglass system that offers ease of installation and a small system footprint. One of the design advantages of the integrated Biotrickling and biofilter system is that it can be configured to offer multiple zones of treatment – for efficient and cost-effective management of complex air streams.

**LONG-LIFE FILTER MEDIA WITH 10-YEAR WARRANTY**

The Envirogen biofilter product line features a set of long-life engineered filter media matched to your project. With filter media guaranteed for up to 10-years it helps ensure lower project life cycle costs, consistent compliance, and excellent system performance:

- ScorFil™ inorganic, scoria lava
- VamFil™ aged bark, engineered
- FlexFil™ synthetic structural or random packed media
- NutraFil™ nutrient impregnated inorganic media
- Other filter media available

## ABOUT ENVIROGEN

Envirogen is a leading international provider of water and wastewater treatment solutions. We solve complex challenges relating to water availability and quality, and help our customers to increase productivity, reduce costs and meet environmental and sustainability targets.

We do this through offering:

- Best in class water and wastewater treatment and process filtration technology
- Expertise in design, project management and engineering
- World class manufacturing and servicing capability



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**UK and Europe:** UK, The Netherlands, Germany, France, Italy.

For further details, visit our website or contact our main office locations above.

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