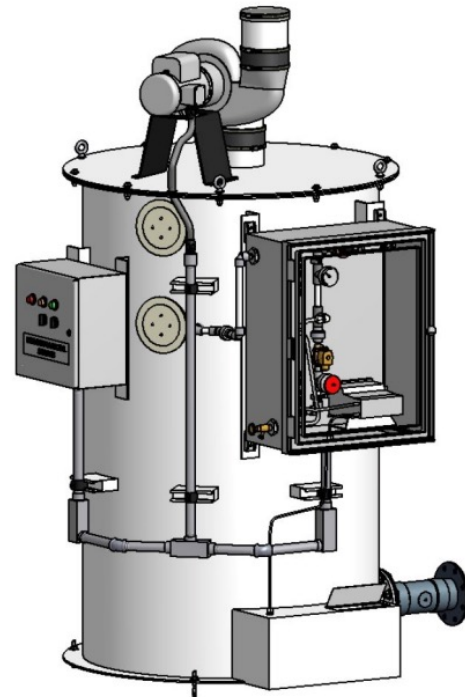


# I-BOx® Biological Odor Control System

The IMS I-BOx® Series odor control system is an advanced two-stage biological system that provides point source odor control. The first stage is a biological reactor where bacteria are used to oxidize hydrogen sulfide ( $H_2S$ ) and organic sulfur compounds. The second stage uses activated carbon to remove residual  $H_2S$  and organic odors.

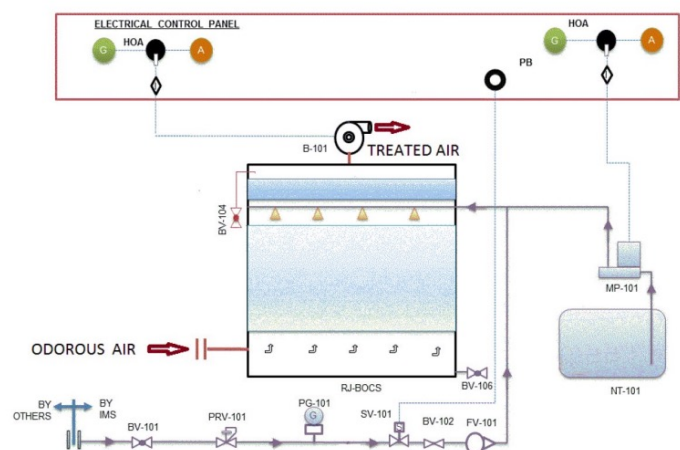
## I-BOx®

- Two-Stage Design for Effective  $H_2S$  and Organic Odor Removal
- Compact Design with Optional Fan Cover
- “Plug & Play” Installation
- Non-Hazardous Biological Process
- 99+%  $H_2S$  Removal Efficiency
- Quiet & Easy Operation



## Major System Components

- Polypropylene Exhaust Fan
- FRP Vessel
- Inorganic Biological Media (Stage 1)
- Activated Carbon Media (Stage 2)
- Fan Cover (Optional)
- Water Panel with Media Irrigation System
- FRP Control Panel
- Integral Nutrient Tank with Nutrient Pump
- Exhaust Stack



I-BOx® - Process & Instrumentation Diagram

## How it Works

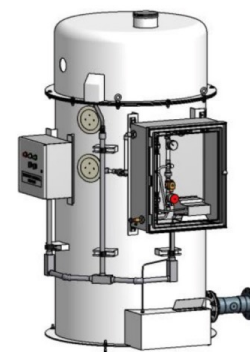
The system comprises two distinct process stages: biological stage and adsorption stage. The adsorption stage uses virgin activated carbon. The fan operates continuously, pulling foul air from the process area through the odor control system and discharging clean air to the atmosphere.

**Stage 1** is designed to remove hydrogen sulfide (H<sub>2</sub>S) and volatile organic sulfur compounds by providing an environment promoting the growth of acidophilic, sulfur-oxidizing bacteria (principally *Thiobacillus thiooxidans*). The first stage media is an inert, porous, mineral material designed to resist compaction and degradation from the acidic sulfates produced by the biological oxidation of hydrogen sulfide. Periodic media irrigation provides moisture for the bacteria and removes the acidic and biological waste byproducts.

**Stage 2** is used to remove any remaining hydrogen sulfide and odorous organic compounds. The second stage media is activated carbon.

## System Features and Benefits

- Two-stage odor control process
- Compact, small footprint design
- Easy to operate
- Low pressure drop
- Single-piece construction
- Inert media
- Superior non-corrosive materials
- Pre-assembled & factory tested
- Suitable for outdoor installation
- Fan cover (Optional)



I-Box® with Optional Fan Cover

## Standard Model Design Data

Model	Airflow Rate CFM (m <sup>3</sup> /h)	Overall Dimension (without stack) L x W x H ft (mm)	Inlet Dimensions Inches (mm)	Shipping Weight lbs (kg)	Operating Weight lbs (kg)	Fan Motor HP (kw)
I-Box® 30	Up to 75 (Up to 125)	2.5 x 2.5 x 6.8 (762 x 762 x 2073)	4.0 (100)	1,600 (726)	1,900 (862)	0.5 (0.37)
I-Box® 42	75-100 (125-255)	3.5 x 3.5 x 6.8 (1067 x 1067 x 2073)	4.0 (100)	2,400 (1089)	2,700 (1225)	0.5 (0.37)
I-Box® 54	150-250 (255-425)	4.5 x 4.5 x 6.8 (1372 x 1372 x 2073)	4.0 (100)	3,400 (1542)	4,100 (1860)	1.0 (0.75)

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## **cleanwater1**

13135 Danielson Street, Suite 204 | Poway, CA 92064

Tel: 858.486.1620 | Email: [info@cleanwater1.com](mailto:info@cleanwater1.com)

## **cleanwater1.com**

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