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.

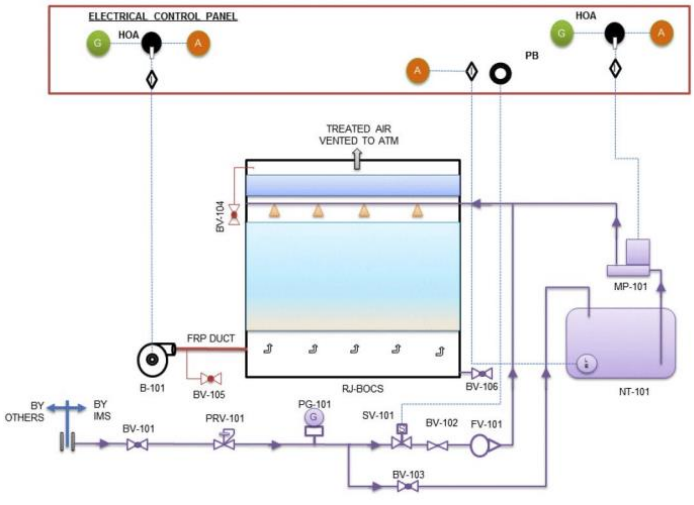
I-BOx®

- Two-Stage Design for Effective H_2S and Organic Odor Removal
- Compact Design
- "Plug & Play" Installation
- Non-Hazardous Biological Process
- 99+% H_2S Removal Efficiency
- Quiet & Easy Operation

I-BOx®

Major System Components

- FRP Exhaust Fan
- FRP Vessel with Extended Sump
- Inorganic Biological Media (Stage 1)
- Activated Carbon Media (Stage 2)
- Air Distribution System
- Media Irrigation System
- FRP Control Panel
- Nutrient Tank with Nutrient Pump
- FRP 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_2S) 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

Standard Model Design Data

Model	Airflow Rate CFM (m^3/h)	Overall Dimension 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® 4000	Up to 350 (Up to 600)	6.5 x 4.0 x 9.5 (1980 x 1220 x 2900)	6.0 (150)	5,600 (2540)	6,000 (2700)	5.0 (3.7)
I-BOx® 5000	350-580 (600-1000)	7.5 x 5.0 x 9.5 (2285 x 1525 x 2900)	6.0 (150)	8,000 (3600)	8,500 (3850)	5.0 (3.7)
I-BOx® 6000	580-850 (1000-1450)	8.5 x 6.0 x 9.5 (2590 x 1830 x 2900)	7.0 (180)	9,000 (4082)	10,000 (4500)	5.0 (3.7)
I-BOx® 7000	850-1,200 (1450-2100)	9.5 x 6.8 x 9.5 (2895 x 2083 x 2900)	7.0 (180)	11,500 (5216)	12,700 (5760)	5.0 (3.7)
I-BOx® 8000	1,200-1,500 (2100-2550)	12.00 x 8.0 x 9.5 (3658 x 2439 x 2900)	12 (300)	14,500 (6577)	16,000 (7257)	5.0 (3.7)
I-BOx® 8010	1,500-2,000 (2550-3400)	14.00 x 8.0 x 9.5 (4265 x 2439 x 2900)	16 (400)	19,000 (8618)	21,000 (9525)	5.0 (3.7)
I-BOx® 8015	2,000-3,000 (3400-5100)	19.25 x 8.0 x 9.5 (5865 x 2439 x 2900)	16 (400)	28,000 (12700)	31,000 (14061)	5.0 (3.7)
I-BOx® 8020	3,000-4,000 (5100-6800)	25.00 x 8.0 x 9.5 (7620 x 2439 x 2900)	16 (400)	37,000 (16783)	41,000 (18600)	7.5 (5.5)
I-BOx® 8025	4,000-5,000 (6800-8500)	29.75 x 8.0 x 9.5 (9068 x 2439 x 2900)	18 (457)	47,000 (21319)	52,000 (23587)	7.5 (5.5)

cleanwater1
13135 Danielson Street, Suite 204 | Poway, CA 92064
Tel: 858.486.1620 | Email: info@cleanwater1.com

cleanwater1.com