



# SWDBS PRODUCT BROCHURE

## SINGLE WALL DEEP BED SCRUBBER UNIT

### REDUNDANT BLOWER

**THE BION DEEP BED SCRUBBER UNIT** with redundant blowers is great for environments with high levels of corrosion and contaminants at low to mid airflow ranges. It's a versatile unit with a common installation outside of the protected environment, providing clean, pressurized air inside control rooms with electronic equipment.

**MAIN APPLICATIONS**

- Pulp and Paper Mills
- Petrochemical Plants
- Refineries
- Foundries
- Steel Mills
- Laboratories
- Hospitals/IVF Centers
- Museums
- Computer, Control and Motor Control Rooms
- Electrical and Medical Equipment Rooms

**TARGETED GASES**

Hydrogen Sulfide, Sulfur Dioxide, Nitrogen Oxides (NOx), Chlorine, Chlorine Dioxide, Ammonia, Formaldehyde, Acetic Acid and Organic Acids, Mercaptanes, BTX, Hydrocarbons, VSC's, VOC's.

**CONSTRUCTION**

BION's redundant blower DBS units are manufactured of 316 Stainless Steel and a welded, single wall construction - providing maximum durability, ideal for outdoor installations. The standard models range from 1 to 10ft [305 to 3.048mm] tall nominal and 2 to 10ft [610 to 3.048mm] wide nominal to offer a variety of sizing options.

**MEDIA**

At the center of BION's DBS Units is BION engineered, dry-chemical air filtration media - bulk filled within the unit. A wide variety of media types are available, each designed to target specific odors, air pollutants and corrosive gases. BION is happy to assist in selecting the most efficient media prescription to meet your particular needs.

**KEY CHARACTERISTICS**

- Replaceable prefilters and final filters for easy maintenance.
- Standard and customizable configurations available, including multiple materials/finishes, pre and final filter options, and up to four passes of BION chemical media to target numerous particulate and contaminant challenges.
- Single wall construction provides a robust and weatherproof design.
- Gasketed doors for an airtight seal.
- Aluminum extruded track with pile seal ensures easy filter installation, as well as a tight seal to prevent by-pass at each stage.
- Accessible top fill chutes and side clean out ports streamline media maintenance.
- Redundant blower design to prevent down time during maintenance and other tasks.

**BION SUPPORT**

BION offers numerous services including unit sizing and media selection, technical support, media life analysis testing as well as environmental corrosion classification testing.

BR\_ENV\_DBSPRE\_ENG\_V14

# SWDBS PRODUCT BROCHURE

## SINGLE WALL DEEP BED SCRUBBER UNIT



STANDARD SWDBS (REDUNDANT BLOWER)	Nominal Unit Width - ft [mm]					
	2 [610]	4 [1219]	5 [1524]	6 [1829]	8 [2438]	10 [3048]
1 [305]						
2 [610]	400 CFM (680 m³/h) <i>5 ft³ (0,142 m³)</i>	800 CFM (1,359 m³/h) <i>10 ft³ (0,283 m³)</i>		1,200 CFM (2,040 m³/h) <i>15 ft³ (0,425 m³)</i>		
3 [914]				1,800 CFM (3,060 m³/h) <i>21 ft³ (0,595 m³)</i>		
4 [1219]			2,000 CFM (3,398 m³/h) <i>22 ft³ (0,623 m³)</i>	2,400 CFM (4,078 m³/h) <i>27 ft³ (0,765 m³)</i>	3,200 CFM (5,440 m³/h) <i>36 ft³ (1,019 m³)</i>	
5 [1524]				3,000 CFM (5,097 m³/h) <i>33 ft³ (0,934 m³)</i>	4,000 CFM (6,800 m³/h) <i>44 ft³ (1,246 m³)</i>	
6 [1829]				3,600 CFM (6,116 m³/h) <i>39 ft³ (1,104 m³)</i>	4,800 CFM (8,155 m³/h) <i>52 ft³ (1,472 m³)</i>	
7 [2134]				4,200 CFM (7,136 m³/h) <i>45 ft³ (1,274 m³)</i>	5,600 CFM (9,514 m³/h) <i>60 ft³ (1,699 m³)</i>	
8 [2438]					6,400 CFM (10,874 m³/h) <i>68 ft³ (1,926 m³)</i>	
9 [2743]					7,200 CFM (12,333 m³/h) <i>76 ft³ (2,152 m³)</i>	9,000 CFM (15,291 m³/h) <i>95 ft³ (2,690 m³)</i>
10 [3048]						10,000 CFM (16,990 m³/h) <i>105 ft³ (2,973 m³)</i>

\*\*\*BOLD Denotes Unit Airflow: CFM (m³/h).  
\*\*\*Italic Denotes Media Volume per Individual Media Pass: ft³ (m³)

**STANDARD FEATURES**

- 316 Stainless steel, single wall construction - mill finish
- Gasketed doors
- 2" [48mm] prefilter (Merv 8 [USA] or G4 [EU])
- Two bulk filled media passes with project specific BION chemical filtration media
- 4" [98mm] final filter (Merv 13 [USA] or F7 [EU])
- Draw through configuration
- Redundant, centrifugal, direct drive blowers, each with a severe duty [USA] or IP65 [EU] motor
- VFD and door mounted keypad within each blower section
- Redundant backdraft dampers
- Magnehelic differential pressure gauges across the pre and final filter stages
- Top fill chutes and side clean out ports

**OPTIONAL FEATURES**

- One to four passes of BION Media
- Additional materials of construction = aluminum, 304 stainless steel, and galvanized steel
- TEFC [USA] or IP55 [EU] motor
- Control dampers
- Inlet/outlet transitions
- Single blower
- Passive configuration
- Painted finish
- Inlet mist eliminator
- Rain louver with birdscreen

\*\*[USA] denotes the specifications of equipment manufactured in North America.  
\*\*[EU] denotes the specifications of equipment manufactured in Europe.

# SINGLE WALL DEEP BED SCRUBBER UNIT

## UNIT CONFIGURATION



**MEDIA FOR FILTRATION**

	BION MEDIA FAMILY							
	BION AC	BION ACPA	BION CARB	BION DELTA	BION DOD	BION ISORB	BION OXYL	BION SORB
<b>BIOGAS</b> (Landfill, Waste Water Treatment Plants, Agricultural industry, Food industry, ...)								
<b>H<sub>2</sub>S</b> <b>Siloxanes</b> <b>VOCs</b>	BION AC FAMILY	BION ACPA	BION CARB BG		BION DOD			
<b>INDOOR AIR QUALITY</b> (Hospitals, Schools, Office, Shopping Centres, Airports, Museums, Galleries, ...)								
<b>Acid gases</b> <b>Basic gases</b> <b>Formaldehyde</b> <b>NO<sub>2</sub></b> <b>O<sub>3</sub></b> <b>SO<sub>2</sub></b> <b>VOCs</b>		BION ACPA	BION CARB CR			BION ISORB FAMILY		BION SORB FAMILY
<b>CORROSION CONTROL</b> (Petro chemical (control rooms, safety valves, compressors), Paper Mills and Pulp manufacturing, Mining industry, Refineries, Chemical industry,...)								
<b>Acid gases</b> <b>Basic gases</b> <b>H<sub>2</sub>S compounds</b> <b>Ozone</b>	BION AC FAMILY	BION ACPA	BION CARB CR			BION ISORB FAMILY		BION SORB FAMILY
<b>ODOR CONTROL</b> (Waste Water Treatment Plants, Cannabis plantations, Refineries, Organic Waste from commercial buildings, Food industry, ...)								
<b>Amines</b> <b>Basic gases</b> <b>H<sub>2</sub>S compounds</b> <b>Mercaptanes</b> <b>NOx</b> <b>Ozone</b> <b>VOCs</b>	BION AC FAMILY	BION ACPA	BION CARB ODR	BION DELTA FAMILY		BION ISORB FAMILY	BION OXYL FAMILY	