

**purafil**  
{ Life. *Breathe it in.* }

an SKF Group brand

**SKF**

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{ Life. *Breathe it in.* }

**purafil**





## { Life. *Breathe it in.* }

### A better quality of air for a better quality of life

#### **At Purafil, our passion and purpose is to improve the lives we touch.**

Since 1969, we lead the industry in providing world-class air quality solutions. Every day, we are proud to protect thousands of processes, environments, and people throughout seventy countries with our air filtration systems.

Driven by innovation, we set industry standards with our filtration, systems, and air quality monitors. We establish our unsurpassed reputation by serving five primary industries.

**Commercial & Residential** | **Medical** | **Water-Wastewater** | **Electronics** | **Industrial**

Many world-renowned landmarks, businesses, and industrial facilities trust our filtration solutions to protect their most valued assets. Among our customers' applications are refineries, pulp and paper facilities, municipal water treatment plants, opera houses, hospitals, embassies, universities, international airports, luxury resorts and hotels, office buildings, and financial institutions.







**PURAFIL**

| Where passion meets principle

### **We are inspired to create a better world.**

Our expertise and experience allow us to design revolutionary products. We experiment with and explore materials, processing them, learning about the inherent properties, air flow, and technologies. Every day, our obsession for understanding and constant experimentation leads to a better quality of life. With our patented products, we eradicate particles, gases, odors, and microorganisms from the air.

Some of the benefits we deliver include:

- Removing odors
- Preventing corrosion
- Meeting stringent air quality standards
- Improving comfort levels
- Protecting people from pollution
- Improving equipment reliability
- Monitoring contaminants anywhere, anytime
- Preserving artifacts







## COMMERCIAL & RESIDENTIAL

Breathe. Life depends on it.

### Improving the quality of life

#### Problem:

Air pollution is a major environmental health concern. Even short-term exposure increases the risk of cardiovascular and respiratory health issues.

Scientific research demonstrates we will experience the greatest environmental impact on air quality over the next fifty years.

#### “ Solution:

Purafil offers revolutionary products along with energy-saving programs as part of a broad range of cutting-edge technologies to scrub damaging pollutants from the air. ”

#### Benefits:

- Add comfort
- Sustain a healthier life
- Reduce respiratory infections
- Improve the surrounding environment
- Save energy
- Nurture your world







## MEDICAL

Ensuring air quality meets the most stringent requirements

### In Vitro Fertilization, Diagnostic Testing, Critical Care Units

#### Problem:

Advanced and sensitive medical procedures such as in vitro fertilization are highly dependent on pristine air quality. Diagnostic medical procedures, including computed tomography scans (CT) or magnetic resonance imaging (MRI), rely on sensitive electronic equipment vulnerable to environmental air contaminants.

#### “ Solution:

Purafil protects equipment in healthcare facilities from damaging corrosion with our customized chemical solutions. In addition, healthier air increases patient comfort, reduces infection rates, and provides an overall sense of well-being. ”

#### Benefits:

- Improve potential for successful procedures
- Improve IVF success rates by as much as 25%
- Purify the air throughout the facility
- Deliver superior patient satisfaction and experience
- Extend the life of critical medical equipment components







## WATER-WASTEWATER

Treating air emissions and nuisance odors to ensure compliance with environmental regulations

### Wastewater Treatment Plants, Chemical Storage

#### Problem:

Municipal wastewater treatment facilities have a responsibility to control odors and maintain and protect the quality of life in the neighboring community.

#### “ Solution:

Purafil manufactures equipment and patented chemical media to eliminate odors and corrosive gases and negate the effects of a toxic gas release. ”

#### Benefits:

- Maintain compliance with environmental regulations
- Improve air quality in the surrounding community by removing up to 99% of objectionable odors
- Secure a high level of satisfaction
- Mitigate risks in the event of a toxic gas release
- Protect publicly funded capital investments







## ELECTRONICS INDUSTRY

Protecting critical equipment from air contaminants

### Semiconductor Fabrication Plants, Data Centers

Problem:

Airborne molecular contaminants damage electronics, circuit boards, and components.

“ Solution:

Purafil conducts air quality assessments to characterize the type and level of contaminants.

Using an instantaneous and irreversible process known as chemisorption, we eliminate impurities. Our products are also used for fan filter units, makeup air, and computer room air conditioning, without off-gassing. ”

Benefits:

- Increase operational performance
- Generate energy savings due to a minimal pressure drop
- Mitigate risk to sensitive electronic components







## INDUSTRIAL | Neutralizing gases that trigger hazardous corrosion

### Oil and Gas Industry, Petrochemical, Pulp and Paper Mills

#### Problem:

During manufacturing, harmful chemical by-products are released into the air, causing corrosion on sensitive electronics. Corrosion damage accounts for nearly forty percent of equipment failures in industrial applications.

#### “ Solution:

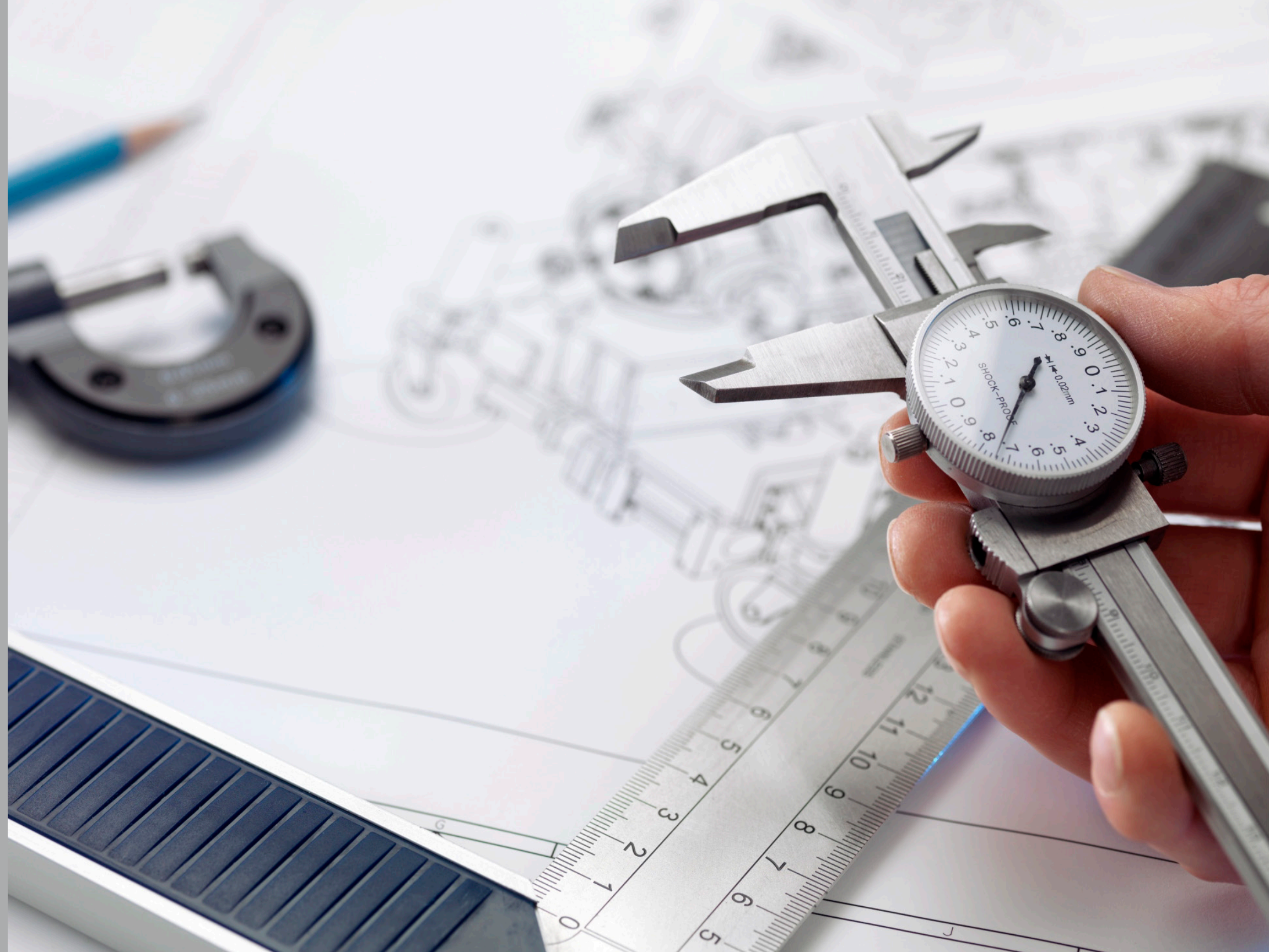
Purafil assesses air quality within the environment using real-time monitoring. Custom-engineered equipment and chemical filtration effectively protect the environment, eliminating corrosive gases. ”

#### Benefits:

- Extend the life of vital equipment
- Increase uptime and potential revenue
- Reduce maintenance costs
- Minimize risk to operations







EQUIPMENT

Trusted technology for superior performance



This illustration indicates the typical process for scrubbing contaminated air using Purafil equipment. Our customer commitment includes designing build-to-order equipment with unique filtration solutions tailored to your environment. We provide superior performance and protection that complies with air quality standards.

- |                               |                            |
|-------------------------------|----------------------------|
| 1. Untreated air              | 5. Initial media pass      |
| 2. Inlet with mist eliminator | 6. Polishing media pass    |
| 3. Prefilter                  | 7. Final filter            |
| 4. Blower                     | 8. A better quality of air |





*Reliable under variety of outdoor conditions  
and medium-to-high nuisance levels*

## Deep Bed Scrubber and Parallel Bed Scrubber

The Purafil Deep Bed Scrubber (DBS) is a highly effective, bulk media scrubber designed for controlled environments with medium-to-high contaminant gas levels. The DBS remedies the gases' corrosive effects and meets stringent air quality standards set by the International Society of Automation (ISA). It is ideal for refineries, steel mills, smelters, chemical plants, petrochemical plants, and other hostile environments. It also functions, if needed, as a shelter-in-place application to protect employees.

The Purafil Parallel Bed Scrubber is a large, bulk media scrubber that removes high concentrations of target gases with very high horizontal air flow in municipal and industrial markets. This equipment is indicated for different applications such as screening rooms, headworks, large pump stations, refineries, and petrochemical plants. It is also used to polish the biofilter discharge air.



Mist Eliminator Section



Media Fill Chutes



Media Sampling

### FEATURES

- Design flexibility for easy customization
- Ideal for high gaseous concentrations
- Multi-bed design provides highest efficiency removal of multiple contaminants
- UL Listed for hazardous and non-hazardous environments
- Indoor/outdoor installation

### SPECIFICATIONS

- Construction Materials: Aluminum or stainless steel
- Dimensions:
  - o Operating Weight - 272 kg (600 lb.) to 25,400 kg (56,000 lb.)
  - o Width - 0.61 m (2 ft.) to 6.1 m (20 ft.)
  - o Depth - 2.4 m (8 ft.) to 9.8 m (32 ft.)
  - o Height - 0.61 m (2 ft.) to 3.0 m (10 ft.)
- Air Flow Range: 680 cmh (400 cfm) to 68,000 cmh (40,000 cfm)
- Power Output Range: 3 hp to 100 hp
- Media Volume: 0.17 m<sup>3</sup> (6 ft.<sup>3</sup>) to 37.38 m<sup>3</sup> (1,320 ft.<sup>3</sup>)





Accommodates virtually any air flow

### Purafil Side Access Unit

By means of high-efficiency media in unique formulations and delivery systems, the Purafil Side Access scrubber (PSA) targets general odor and corrosion control in commercial and industrial environments. It is designed to remove both particulate and gaseous pollutants.

Using modular construction, the PSA easily handles high air flow capacities under both indoor and outdoor conditions. Utilizing Purafil's patented Posi-Track technology, a positive seal is created to prevent air bypass and enhance filtration efficiency.



Designed for PK-12 Modules



Designed for PuraGRID

### FEATURES

- Available in a wide range of customizable, modular designs
- Handles low concentrations, high air flow
- Constructed with or without insulation for energy conservation
- Install indoors or outdoors
- Easy maintenance
- UL Listed for hazardous and non-hazardous environments

### SPECIFICATIONS

- Construction Materials: Aluminum, galvanized and stainless steel
- Dimensions:
  - o Operating Weight - 68 kg (150 lb.) to 9,071 kg (20,000 lb.)
  - o Width - 0.6 m (2 ft.) to 3.0 m (10 ft.)
  - o Depth - 0.91 m (3 ft.) to 4.6 m (15 ft.)
  - o Height - 0.3 m (1 ft.) to 3.0 m (10 ft.)
- Air Flow Range: 425 cmh (250 cfm) to 84,950 cmh (50,000 cfm)
- Power Output Range: 1 hp to 50 hp
- Media Volume: 0.028 m<sup>3</sup> (1 ft.<sup>3</sup>) to 5.66 m<sup>3</sup> (200 ft.<sup>3</sup>)





*Easy installation for industrial design*

### Purafil Positive Pressurization Unit

The Purafil Positive Pressurization Unit (PPU) and Corrosive Air System (CA) are self-contained, air scrubbing systems designed to provide pressurized and/or recirculated air, free of corrosive gases.

The PPU is recommended for controlled environments containing sensitive computer electronics and electrical equipment. Key application areas for the PPU are control room environments such as data centers, telecommunication centers, pulp and paper mills, petrochemical plants, refineries, steel mills, process industries, and laboratories.



**Easy access design**



**Blower access with safety switch**

### FEATURES

- Vertical or horizontal air flow
- Indoor applications for controlled environments
- Robust design in a small footprint
- Plenum with dampers introduces outside air and recirculation to maintain continuous positive pressure in control rooms
- Speed control is standard
- Built-in gauges for easy operation

### SPECIFICATIONS

- Construction Materials: Painted cold rolled steel, aluminum or stainless steel
- Dimensions:
  - Operating Weight - 281 kg (620 lb.) to 907 kg (2,000 lb.)
  - Width - 0.6 m (2 ft.) to 1.2 m (4 ft.)
  - Depth - 0.6 m (2 ft.) to 1.2 m (4 ft.)
  - Height - 2.1 m (7 ft.) to 2.7 m (9 ft.)
- Air Flow Range: 425 cmh (250 cfm) to 6,760 cmh (4,000 cfm)
- Power Output Range: 1 hp to 5 hp
- Media Volume: 0.056 m<sup>3</sup> (2 ft.<sup>3</sup>) to 0.45 m<sup>3</sup> (16 ft.<sup>3</sup>)





*Superior performance in climates with fluctuating temperatures and relative humidity*

## Drum Scrubber

Our Drum Scrubber (DS) is designed for wastewater treatment facilities, pump stations, residential areas, hotels, and other similar applications where odor control is desirable. Constructed of corrosion-resistant materials and requiring essentially no maintenance, the DS can be used in remote outdoor areas or zones where high levels of acid gases are present. The scrubber consists of layered beds of chemical media with optional add-ons such as passive configuration, silencers, mist/grease eliminators, and rain hoods.



Pre-wired for easy installation



Top fill, bulk media



Inlet for ducting

## FEATURES

- Industrial and municipal water treatment applications
- Commercial odor control solutions
- Outdoor installation available for vertical air flow
- Quiet operation for residential neighborhoods
- Clears medium-to-high levels of contaminant gases
- Easy installation and maintenance

## SPECIFICATIONS

- Construction Materials: Low-density polyethylene
- Dimensions:
  - o Operating Weight - 184 kg or (405 lb.) to 10.43 kg (2,300 lb.)
  - o Diameter - 0.6 m (2 ft.) to 1.5 m (5 ft.)
  - o Height - 1.2 m (4 ft.) to 2.1 (7 ft.)
- Air Flow Range: 170 cmh (100 cfm) to 1,700 cmh (1,000 cfm)
- Power Output Range: 1/3 hp to 5 hp
- Media Volume: 0.14 m<sup>3</sup> (5 ft.<sup>3</sup>) to 1.1 m<sup>3</sup> (39 ft.<sup>3</sup>)





*Definitive answer for high gaseous concentration  
and high air flow location*

## Biological Air Treater

The Biological Air Treater (BAT) provides superior hydrogen sulfide gas (H<sub>2</sub>S) and volatile organic compound (VOC) removal for municipal and industrial applications. In circumstances with high concentrations, the BAT is the most economical and convenient solution. Our patented media blend, a dual-phase bio-support structure, allows our standard equipment to achieve up to 99% odor removal when paired with a dry scrubber.



Control Panel



Blended Media

### FEATURES

- End-to-end odor solution
- Advanced dual-phase bio-support structure
- Life greater than 10 years
- Patented process and controls
- Significantly lower cost of ownership
- Reduced footprint

### SPECIFICATIONS

- Construction Materials: Fiberglass-reinforced plastic or high-density polyethylene
- Dimensions:
  - o Operating Weight - 1,360 kg (3,000 lb.) to 13,607 kg (30,000 lb.)
  - o Diameter - 1.2 m (4 ft.) to 4.3 m (14 ft.)
  - o Height - 3.0 m (10 ft.) per stage (up to 3 stages)
- Air Flow Range: 170 cmh (100 cfm) to 170,000 cmh (100,000 cfm)
- Power Output Range: 1 hp to 100 hp
- Media Volume: formulated per customer's specific needs





Moccasin Bend Wastewater Treatment Plant,  
Chattanooga, Tennessee

Emergency Gas Scrubber

An Emergency Gas Scrubber is designed to control catastrophic gas releases from 68 kg (150 lb.) to over 2,727 kg (6,000 lb.) while mitigating any risk to human lives in the surrounding communities. This scrubber prevents toxic chlorine (Cl<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), or ammonia (NH<sub>3</sub>) gas releases, resulting from a failure in the storage cylinder or system, by providing immediate removal of leaking gas. It is built for indoor and outdoor installation and it requires minimal maintenance.



Fiberglass Blower



Control System

FEATURES

- Safely neutralizes toxic chlorine and other vapors with dry scrubbing media
- Instantaneous, irreversible chemical reaction
- Spent media is landfill-disposable
- Minimal maintenance
- Meets requirements of the U.S. Uniform Fire Code, Article 80
- Meets requirements of the U.S. EPA Emergency Management Program

SPECIFICATIONS

- Construction Materials: Fiberglass or aluminum
- Dimensions: Sized for 150-pound or 1-, 2-, or 3-ton releases
  - o Operating Weight - 1,043 kg (2,300 lb.) to 26,308 kg (58,000 lb.)
  - o Width - 2.4 m (8 ft.) to 3.7 m (12 ft.)
  - o Depth - 1.2 m (4 ft.) to 3.4 m (11 ft.)
  - o Height - 2.1 m (7 ft.) to 5.8 m (19 ft.)
- Air Flow Range: 1,190 cmh (700 cfm) to 18,700 cmh (11,000 cfm)
- Power Output Range: 5 hp to 75 hp
- Media Volume: 1 m<sup>3</sup> (36 ft.<sup>3</sup>) to 32.9 m<sup>3</sup> (1,160 ft.<sup>3</sup>)





PuraBreeze 100



PuraBreeze 300

## PuraBreeze

The PuraBreeze is an exclusive, compact air purifier ideal for residential and commercial applications such as office spaces, hotel rooms, and medical environments.

This unique air purifier combines a PM<sub>2.5</sub>-rated HEPA filter, a gaseous filter, and a microorganism filter, all in one. It is the only air purifier designed to eradicate smoke, dust, pollen, dander, other allergens, odors, pathogenic bacteria, and more than 230 irritant gases such as formaldehyde, ozone, and sulfur dioxide.

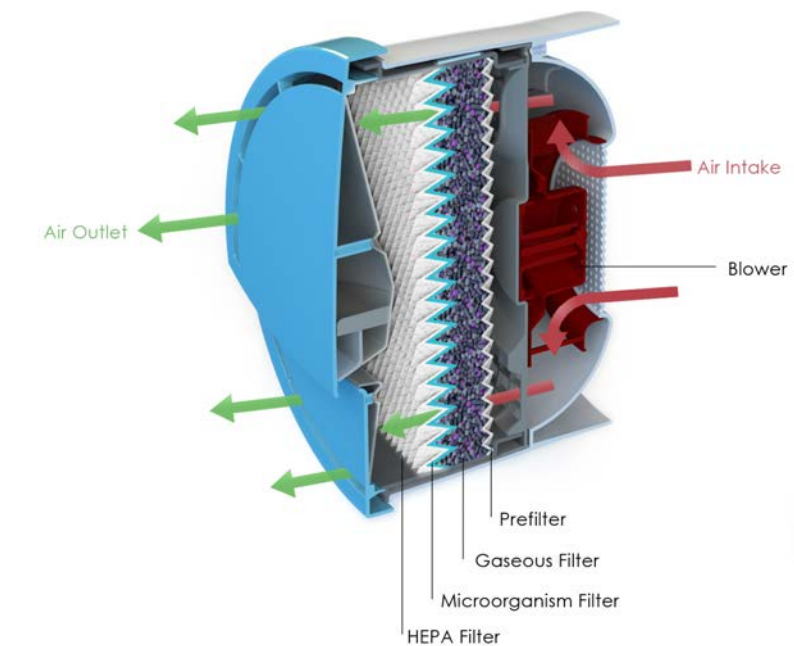
Improve health, comfort, and well-being.

## FEATURES

- HEPA filter removes 99.97% of dust at 0.3 microns
- Patented chemical filter removes 99.9% of odors and harmful gases
- Certified microorganism filter removes 99% of bacteria and fungus
  - o Escheria coli (E. coli) at 99.97%
  - o Staphylococcus aureus at 75%
  - o Klebsiella pneumoniae at 99.86%
  - o Candida albicans at 98.87%
- Removes 4 times more formaldehyde than activated carbon filter according to the ASTM International Standards D6646
- Chemical filter made in the United States
- Quiet and compact, with visual appeal and no maintenance
- UL, cUL, CE, CCC, and Guangdong Detection Center of Microbiology certified

## SPECIFICATIONS

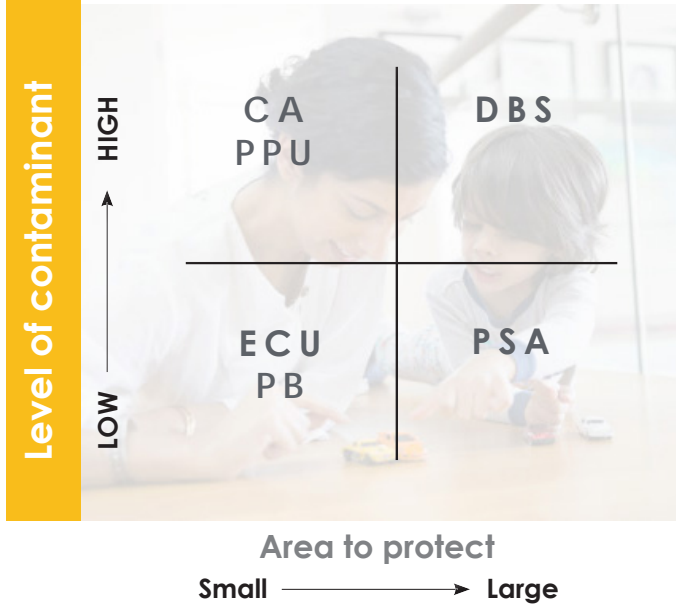
- Construction Materials: Plastic, design patent-pending
- Dimensions:
  - o Weight - 4 kg (10 lb.)
  - o Diameter - 33 cm (13 in.)
  - o Height - 20 cm (8 in.)
- Air Flow Range: 170 cmh (100 cfm)
- Power Output Range: 120 watts
- Room Size Range: 18 m<sup>2</sup> (195 ft.<sup>2</sup>)
- Number of Air Changes: 3 per hour
- HEPA Filter: Merv 15



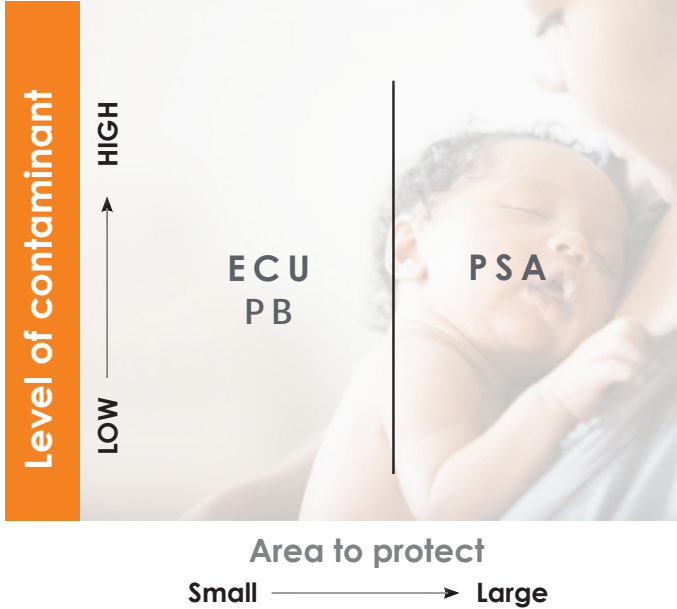


# Select Your Own Equipment

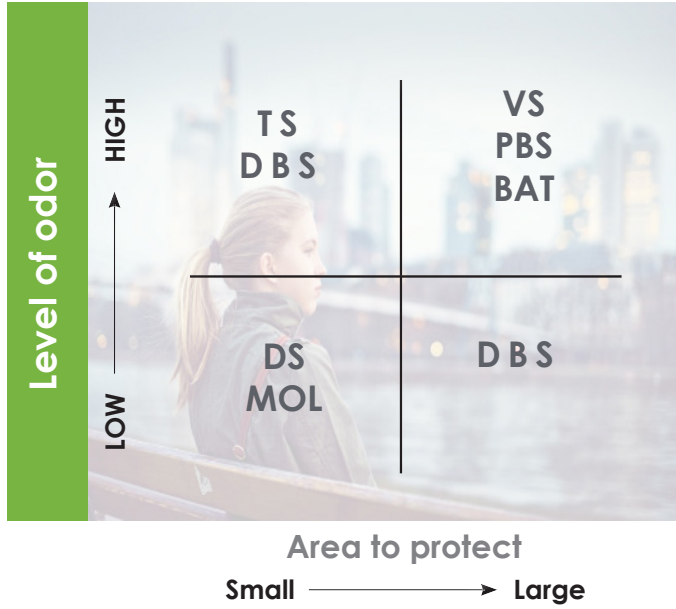
## COMMERCIAL & RESIDENTIAL



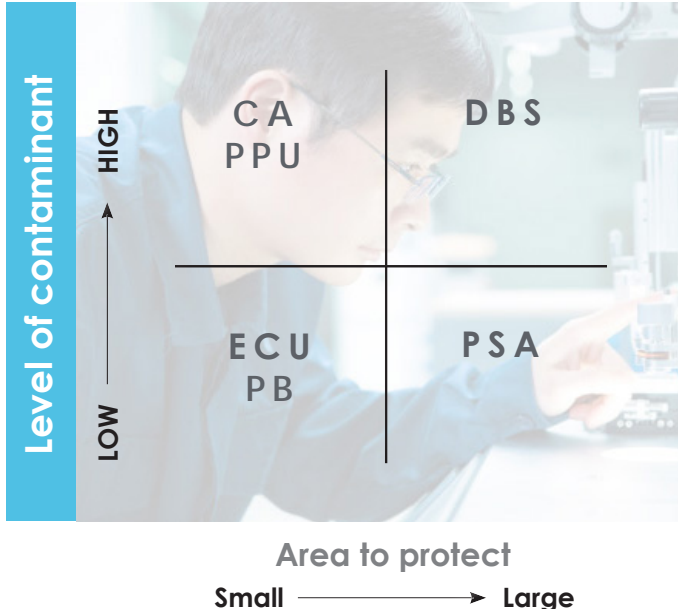
## MEDICAL



## WATER-WASTEWATER



## ELECTRONIC



## INDUSTRIAL



### EQUIPMENT:

- BAT Biological Air Treater
- CA Corrosive Air Unit
- CIF Compressor Intake Filter
- DBS Deep Bed Scrubber
- DS Drum Scrubber
- EGS Emergency Gas Scrubber
- ECU Electronic Cabinet Unit
- MOL Mole Manhole Scrubber
- PB PuraBreeze
- PBS Parallel Bed Scrubber
- PPU Positive Pressurization Unit
- PSA Purafil Side Access Unit
- TS Tub Scrubber
- VS Vessel Scrubber

For additional selection criteria, please contact your local Purafil partner.



FILTERS

A complete scope of chemical filters  
fine-tuned for any project



Optimizing filtration solutions for better air quality with fifteen different formulations

Filter Types	Pressure Drop lwg (Pa)	H <sub>2</sub> S Capacity Lb. (gm)	Type of Gas & Concentration Level
PuraGrid 2" or 50 mm thickness	0.3 (74.7)	1.70 (771)	Acid and Base Low concentrations
Purafilter 2" or 50 mm thickness	0.4 (99.6)	0.40 (181)	Acid and Base Low concentrations
PuraBead 0.25" or 6 mm thickness	0.2 (49.8)	0.163 (74)	Acid and Base Low concentrations

With custom-engineered solutions for new or retrofit projects, every filter eliminates any trace of odors or harmful gases from the air.





## CHEMICAL MEDIA

Patented formulations

### Genuine media formulations with the highest capacity for controlling gaseous contaminants

Purafil's patented, spherical, porous pellets are comprised of different chemical compounds such as activated alumina, sodium permanganate, activated carbon, and potassium permanganate.

We remove gaseous pollutants from the air through a unique chemical process known as chemisorption. During chemisorption, the media converts harmful gases from the air into harmless materials that are trapped inside the pellet. This process is instantaneous and irreversible.





**MODULES** | Provides permanent removal of pollutants



PK-18 Module

PK-12 Module

The Purafil module acts as a delivery system, or disposable container, for media in some equipment designs. Our professional team of highly skilled scientists and engineers has created an aerodynamic airfoil screen design to reduce resistance to air flow and improve air distribution. This enhancement provides a lower pressure drop, reducing energy costs, and is easy to install and change out.

Contact your local Purafil distributor today for more information on genuine Purafil products.

Solutions for *healthy living*

Target Goal	Application	Chemical Media Solutions*		
		Basic	Plus	Premium
Remove Odors Improve Comfort	Municipal wastewater treatment plants	Odormix SP	Odorcarb Ultra	Chlorosorb® Ultra
	Airports, public places, hospitals, clinics	Purakol®	SP or PuracarbAM	Triple Blend
Prevent Corrosion and Increase Equipment Reliability	Refineries, pulp and paper mills, petrochemical plants, process manufacturers	CP Blend Select	SP Blend	Puracarb®
	Data centers			
	Semiconductor fabrication plants, disk drive manufacturers			
	MRI/CT Scans/IVF			
	Compressors/Motors			
Preservation	Museums, archives, historic artifacts	CP Blend Select	SP Blend	Puracarb
Protect People and Communities	Hazardous gas storage (Cl <sub>2</sub> , H <sub>2</sub> S, NH <sub>3</sub> )	**	**	**
Increase Shelf Life of Consumables	Transport and Storage of fruits, vegetables, flowers	Chemisorbant or CP	Select	SP
Protect People from Pollution and Protect Lung Health	Schools, day care centers, luxury resorts, hotels, office buildings, private residences, hospitals, veterinary clinics	Select CP	CP Blend Select	CH

\*Typical media recommendations presented for common applications. Contact Purafil for precise media recommendation suited for your particular project.

\*\*Custom-tailored media blends determined by analysis of project needs.

We remove contaminants such as:

- Acid Gases: H<sub>2</sub>S, SO<sub>x</sub>, No<sub>x</sub>, chlorine, hydrogen fluoride, etc.
- Basic Gases: ammonia, amines, hydroxides, etc.
- Volatile Organic Compounds: formaldehyde, benzene, toluene, xylene, etc.
- Odors from: sewer and wastewater, decaying matter, nail and hair salons, chemical fumes, fire and smoke, cooking, vehicle exhaust, mold and mildew, pets, morgues, volatile organic compounds off-gassed by paint fumes, new carpets, furniture, remodeling construction, particleboard, etc.



ASSESS & MONITOR

Defining the environment for air quality

Being vigilant to keep environments safe

Instruments to measure corrosion levels

We assess and measure the overall reactivity level of air contaminants, temperature, and relative humidity in a controlled environment. Reactivity monitoring is an accurate and dependable method of evaluating the quality of the air. The Purafil OnGuard provides real-time information, anywhere, anytime.

Connections/Features	OnGuard 3000	OnGuard 4000
PC Connection to OnGuard	USB cable	Ethernet cable
OnGuard to Process Control	Analog, 4-20 mA	Analog, 4-20 mA
Access information	Only when connected	Anywhere, anytime
Alarms	Local, lights	Email



OnGuard 4000

Air Quality Assessment

The Purafil Corrosion Classification Coupon (CCC) analysis reliably determines the type and thickness of corrosion build-up on the surface of each metal coupon. Positioning CCCs to test multiple locations within the target environment is a proven resource for industrial, museum, and other applications. The advanced CCC+ measures the amount of corrosion forming on copper and silver surfaces in addition to logging the temperature and relative humidity for classification.

Features	CCC	CCC+
Copper Corrosion Analysis	•	•
Silver Corrosion Analysis	•	•
Comprehensive Report	•	•
Temperature Logger		•
Relative Humidity Logger		•



Purafil Corrosion Classification Coupon





## LABORATORY SERVICES

Conducting thorough analyses  
at every step

### Laboratory and Technical Services

Purafil's state-of-the-art laboratory assists customers in classifying the level of air quality in each individual environment. Every year, we take pride in conducting thousands of analyses in twelve different languages.

In line with our dedication to customer service, one of the many added-value benefits provided is continual access to Purafil's team of scientists and technicians. Every environment requires analysis, and we are able to offer custom-tailored chemical media solutions for a better quality of air.

We look forward to the opportunity to be of service.





Our factory is located near Atlanta, Georgia, United States

Member: ASHRAE, USGBC, ASDTM, IEST, ITRS, ISA,  
ISO, IAQA, TAPPI, A&WMA, AWWA, WEF, AIC, SMTA  
Affiliation: SEMI, AFS, NAFA  
Certification: ISO, UL, cUL, CE, CCC, and Guangdong Detection Center  
of Microbiology

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