

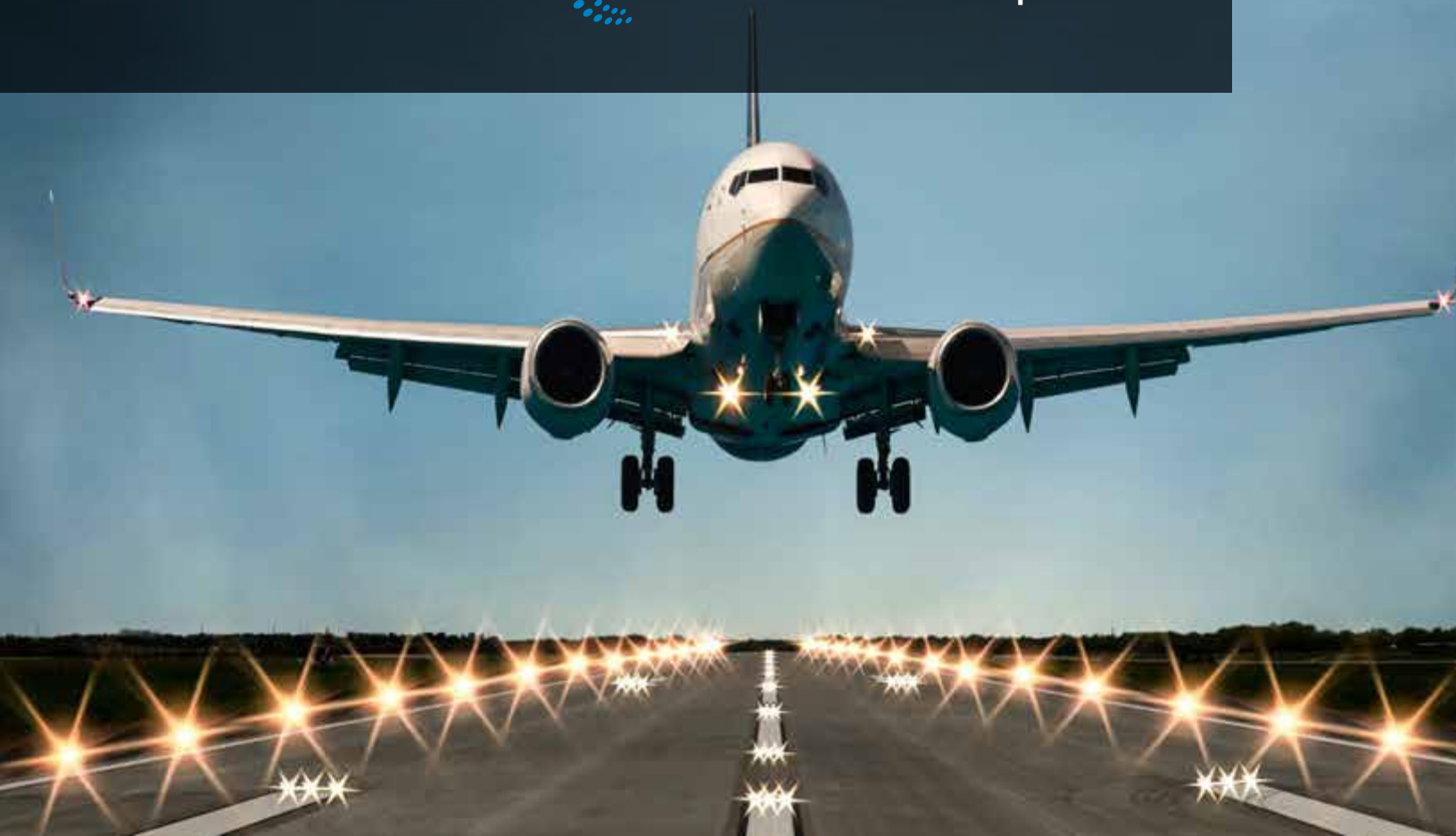
MARKET SEGMENT BROCHURE: AIRPORTS

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# A FIRST-CLASS EXPERIENCE FOR EMPLOYEES & TRAVELERS

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PROTECT YOUR BIGGEST ASSETS—YOUR PASSENGERS  
AND EMPLOYEES—FROM HARMFUL GASES AND ODORS.



# ARE YOU GIVING EMPLOYEES & TRAVELERS A FIRST-CLASS ENVIRONMENT?



## BREATHING NEW LIFE INTO AIRPORTS

Airports are our gateways to new adventures, sights unseen and original experiences, so it's no surprise that they're constantly facing indoor air quality (IAQ) issues. Whether it's heavier outdoor odors like jet exhaust and deicing chemicals or lighter nuisance odors from bathrooms and food courts, it's critical to maintain a healthy IAQ.

Poor IAQ causes us to breathe unhealthy air and lessens the guests' experience. Purafil's drop-in Odor Pleat filter is perfect for the lighter odors and contaminants while the Purafilter High Efficiency (HE) works well at eliminating the smells and contaminants from jet and diesel exhaust, kitchen smoke, and bathrooms.

***Purafil Solution: Purafil Odor Pleat, Purafilter HE, Purafil V-Bank***

## IS JET FUEL EXHAUST CORRODING YOUR EQUIPMENT?

Airports rely on technology to ensure smooth operations. Whether it's critical equipment used by air traffic controllers or computers in terminals, airports can't afford for it to fail. But how do you protect your equipment from failure when jet fuel exhaust is letting off sulfur dioxide ( $\text{SO}_x$ ), nitrogen oxides ( $\text{NO}_x$ ) and other gases that are damaging your sensitive equipment? Utilize a gas phase filtration system that captures and transforms corrosive gases into harmless substances.

By filtering out gaseous contaminants, Purafil's solutions safeguard your critical equipment from corrosion and eventual failure (saving you on repairs), so you can focus on operations. This also has the added bonus of removing heavier, consistent odors and contaminants. No more funky smells, no more corrosion!

***Purafil Solution: Outdoor Pollution & Corrosion Blend, Purafilter HE, Canisters, Purafil Modules***

## REDUCED OUTDOOR AIR, REDUCED ENERGY BILL?

While airports are great layover spots to our final destinations, they're not so great in terms of pollution and IAQ. To provide employees and travelers with fresh, healthy air, airports must either bring in cleaned outdoor air or recirculate and filter indoor air. Without the proper filtration system, this can get costly rather quickly.

So, how do you keep energy costs down but still give employees and travelers clean air to breathe? By reducing the amount of outdoor air needed and installing an effective filtration system. Purafil filters get rid of gaseous contaminants, clean the already cooled terminal air, and recirculate it so you don't have to spend money cooling the outdoor air. Reduces your need for outdoor air and save *big*!

***Purafil Solution: Drop-In Gas Phase Filters, Canisters, Purafil Modules, Purafil Side Access (PSA)***

# FIRST-CLASS FLIGHT TOWER



## FAA TOWER TACKLES ODOR

As the busiest airport in the world, it's important to be proactive in protecting not only your employees and critical equipment, but your passengers as well. A large airport in the southeast was aware of the high level of pollution from jet fumes and vehicle exhaust as well as deicing glycol odors and the impact it could have on its new FAA control tower. To prevent these issues from becoming a major health hazard, they installed Purafil gas phase filtration systems.

Jet fuel exhaust contains high levels of sulfur and other contaminants that let off an unpleasant odor. This makes for an unhealthy work environment for employees and can also lead to the corrosion of critical equipment used by air traffic controllers.

The FAA installed easy access tracking into 10 of their air handling units to utilize Purafil Select CP Blend media modules. The media filters out these gases using a process known as chemisorption, which converts corrosive and odorous gases into harmless salts. We also suggested reducing the amount of outdoor air and instead cleaning and recirculating the indoor air.

**This helped improve the environmental air integrity as well as lowering energy costs. As a result of these efforts, the airport remains a happy and loyal Purafil customer.**

Purafil, Inc. is the leading manufacturer of filtration media and scrubbers that provide a safe and comfortable environment. Our products and solutions identify and remove harmful and unpleasant particles, gases, odors, bacteria and viruses from the environment. The results are increased comfort levels, reduced energy costs, and confidence that your airport or control tower will provide the ideal employee and traveler experience.

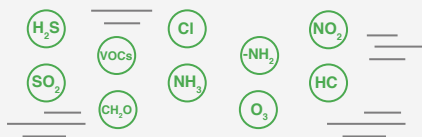


# PURAFIL'S MEDIA ADVANTAGE

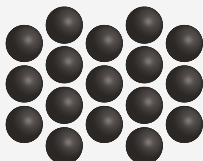
## WHEN ONE-SIZE-FITS ALL JUST DOESN'T WORK

Are you ready for a custom solution that thoroughly eliminates the gases that activated carbon leaves behind? A one-size-fits-all solution won't cut it, which is why Purafil specially engineered custom blends designed to address the unique problems you face while *permanently* removing gases—even the ones carbon can't remove. This is done through chemisorption, a process that chemically transforms gases into harmless solids that remain trapped inside the media.

### Problem Gases In The Air Stream



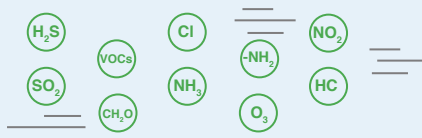
### Activated Carbon



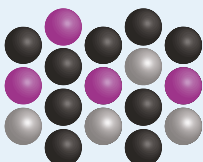
### Gases Carbon Fails to Eliminate:



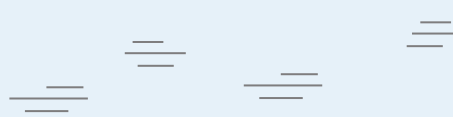
### Problem Gases In The Air Stream



### Purafil Custom Media



### Purafil Peace of Mind



## JET & DIESEL EXHAUST BLEND:

Gets rid of jet exhaust and the health impacts it brings so travelers and staff can enjoy clean, odorless air. The World Health Organization (WHO) shows that exposure to nitrogen oxides can cause irritation of the eyes, skin and respiratory system, headaches, difficulty breathing and asthma. This blend removes common exhaust gases including  $H_2S$ ,  $NO_2$ ,  $SO_2$ , HC, VOCs and  $CH_2O$ .

## BATHROOM ODOR & AMMONIA BLEND:

Removes common bathroom odors—including urine, ammonia and chlorine—so you can give travelers a five-star experience. The Center for Disease Control and Prevention cites coughing, eye irritation, burns on the throat, skin, eyes and lungs and even lung disease as common symptoms of ammonia exposure. This blend removes bathroom gases including  $H_2S$ ,  $NH_3$  and  $-NH_2$ .

## OUTDOOR POLLUTION & CORROSION BLEND:

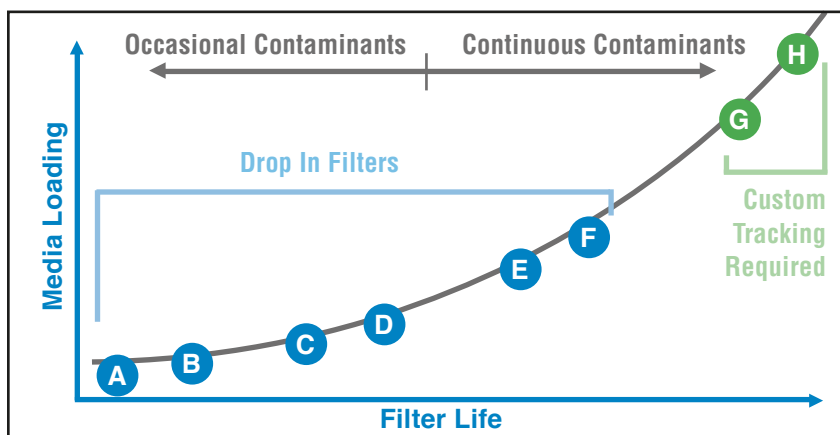
Eliminates corrosion-causing pollution. Hydrogen sulfide exposure can result in nausea, headaches, fatigue, coughing, eye and throat irritation and even unconsciousness, according to the US Department of Labor. Protect your control tower computers against corrosion with Purafil's custom media. This blend removes common gases including  $H_2S$ ,  $NO_2$ ,  $SO_2$ , VOCs and  $O_3$ .

## KITCHEN ODOR & SMOKE BLEND:

Captures smoking odors. The EPA defines the effects of exposure to sulfur oxides as difficulty breathing, respiratory system problems and asthma irritation. It can also cause nose and throat irritation and excessive coughing. Prevent smoking odors from leaving the smoking lounge with our broad-spectrum media. This blend removes common kitchen gases including  $H_2S$ ,  $NO_2$ ,  $SO_2$ , VOCs and Cl.

## MEDIA LOADING BY FILTER

After you've decided which blend best suits your application, you can choose the media loading capacity that makes the most sense for your needs. We offer a wide range of filters to suit any filtration need.



# ADVANCED FILTERS FOR EVERY NEED

## Purafilter Odor Pleat



A

Excellent entry level gas phase filter for intermittent applications. Low Pressure drop keeps operating expenses down.

Media Loading up to	0.5 lb	0.2 kg
Pressure Drop 1"	N/A	N/A
Pressure Drop 2"	0.36 iwg	89.7 pa
Pressure Drop 4"	0.21 iwg	52.3 pa

## Purafilter Odor Pleat Plus



B

Low Pressure drop keeps operating expenses down. Get Purafilter Odor Pleat Plus for 50% more media loading.

Media Loading up to	1 lb	0.5 kg
Pressure Drop 1"	N/A	N/A
Pressure Drop 2"	0.52 iwg	129.4 pa
Pressure Drop 4"	0.47 iwg	116.9 pa

## Purafilter



C

Combination chemical and particulate filter that integrates Purafil® patented dry-scrubbing media. Easily replace current particulate filter and upgrade the air quality for your tenants.

Media Loading up to	12 lbs	5.44 kg
Pressure Drop 2"	0.51 iwg	127 pa
Pressure Drop 4"	0.43 iwg	107.1 pa
Pressure Drop 12"	0.47 iwg	117.1 pa

## Purafilter HE



D

Combination chemical and particulate filter that integrates Purafil® enhanced carbon-loaded non-woven media using 100% synthetic fibers. Available in four specially blended combinations to address common air quality issues.

Media Loading up to	15 lbs	6.8 kg
Pressure Drop 2"	0.62 iwg	154.4 pa
Pressure Drop 4"	0.46 iwg	114.6 pa
Pressure Drop 12"	0.36 iwg	89.7 pa

## PuraGRID Filters



E

A revolutionary filter designed to supply large amounts of chemical filtration with minimal pressure drop. Available in Puracarb IAQ and Puracarb AM (Ammonia).

Media Loading up to	21 lbs	9.53 kg
Pressure Drop 2"	0.29 iwg	72.2 pa
Pressure Drop 4"	0.58 iwg	144.5 pa

## Purafil V-Bank



F

The Purafil V-Bank uses a high-impact plastic frame with a built-in header for strong, lightweight housing. Ideal for use in odor control where higher levels of contaminants would overwhelm the particulate filter.

Media Loading up to	28 lbs	12.7 kg
Pressure Drop: PCB	0.51 iwg	127 pa
Pressure Drop: CLR	0.36 iwg	89.7 pa
Pressure Drop: Blend	0.36 iwg	89.7 pa

## Purafil Canisters



G

For high concentrations of gaseous contaminants. Available in galvanized steel, stainless steel and high-impact plastic housing. Designed to fit existing holding frames or built into Purafil's custom equipment.

Media Loading up to	90 lbs	40.82 kg
Pressure Drop 9"	1.75 iwg	435 pa
Pressure Drop 18"	0.42 iwg	105 pa
Pressure Drop 24"	0.18 iwg	45 pa

## Purafil Modules



H

Available in high-impact plastic or galvanized steel, the specialty construction is adhesive free with highly aerodynamic airfoil screens to increase contact time while reducing pressure drop. Sampling ports allow you to test media life before replacing.

Media Loading up to	200 lbs	90.72 kg
Pressure Drop CK	0.6 iwg	149.5 pa
Pressure Drop PK12	0.6 iwg	149.5 pa
Pressure Drop PK18	0.49 iwg	102.1 pa

# PURAFIL CUSTOM EQUIPMENT



## FRONT ACCESS SYSTEM (FAS)

Modular frames are individually tracked for Purafil media modules. The FAS is specified in retrofit applications or custom air handling units. Airflows up to 2,000 CFM per 24" frame



## COMPACT QUIET CABINET (CQC)

A compact recirculation unit with a sound level less than 60dB, making it exceptionally quiet. It has a sleek design that fits in anywhere and casters for easy portability. Airflows up to 500 CFM



## PURAFIL® SIDE ACCESS SYSTEM (PSA)

The PSA is designed for both particulate and gaseous contaminant control and works in conjunction with the facility's air handling system. Airflows of 250 - 50,000 CFM.

## AIR QUALITY ASSESSMENT

Corrosive gas concentrations are invisible to the human eye and are commonly measured in parts per billion (ppb). Measuring the effects of corrosion requires reactivity monitoring (real-time or passive) as prescribed by ISA, ASHRAE, and iNEMI. We assess your environment to determine the types and levels of corrosive gases in your data centers, server rooms, switches, I/O devices, power distribution and UPS rooms. Strict criteria were developed by the International Society of Automation (ISA) to protect sensitive electronics from damage caused by corrosive gases. The ISA Standard 71.04-2013 has become the accepted guide for warranties of electronic equipment.



Purafil provides specially prepared Corrosion Classification Coupons (CCCs) for critical operating environments. The rate of corrosion buildup, measured in angstroms, on the coupon is indicative of the environment's severity level – G1, G2, G3, or GX. Purafil performs this service as a diagnostic tool to determine the types and levels of contaminants in various areas of your facility. We also offer the OnGuard Smart, which provides real-time updates on temperature, humidity and the reactivity of contaminants in the air, so you can be proactive in media replacements and maintain quality air.

ISA STANDARD 71.04-2013			
CLASS	COPPER REACTIVITY LEVEL (IN ANGSTROMS)*	SILVER REACTIVITY LEVEL (IN ANGSTROMS)*	AIR QUALITY CLASSIFICATIONS
G1	< 300	< 200	<b>MILD</b> <i>Corrosion is not a factor</i>
G2	< 1,000	< 1,000	<b>MODERATE</b> <i>Corrosion is measurable</i>
G3	< 2,000	< 2,000	<b>HARSH</b> <i>High probability that corrosion attacks will occur</i>
GX	> 2,000	> 2,000	<b>SEVERE</b> <i>Electronic equipment is not expected to survive</i>

\*Normalized to a 30-day exposure. 1 angstrom = one hundred-millionth of a centimeter, or  $10^{-10}$  meter.