



A SMARTER APPROACH TO GROW HOUSE AIR FILTRATION

EXPERTS FOR 50 YEARS IN FILTERING ODORS, GASES
AND MICROBIAL CONTAMINANTS

SPHINXTM
GROW HOUSE AIR FILTRATION

For hemp facilities operating only where permitted and licensed
under all applicable state and federal laws and regulations

EFFICIENTLY ELIMINATE ODORS & MILDEW



For hemp facilities operating only where permitted and licensed under all applicable state and federal laws and regulations

GOT AIR FILTRATION, BUT STILL HAVE ODORS?

The odor produced by some plants and flowers can be pungent, which can lead to complaints from the surrounding community. These crops produce a wide range of odoriferous gases, including some that cannot be captured by carbon filtration. As a conscientious neighbor, you want to limit these issues, which is why odor control is such an important part of your operation.

Unlike the competing solutions on the market, our custom blended media offers complete odoriferous gas removal. Activated carbon's limitations in humid environments also lead to shorter filter life and can release odors back into the air. SPHINX odor blends are custom engineered to ensure a complete odor solution, which means no more complaints.

Solution: SPHINX Odor Media, Modules, Canisters, Clean Air Cabinet, Side Access Unit

MAXIMIZING YIELD BY ELIMINATING MOLD & POWDERY MILDEW GROWTH

In general, a combination of high temperatures and high humidity make for an ideal growing environment, but they also create the perfect breeding ground for mildew growth. When you pair high humidity and temperature with low airflow, you run into problems like hindered plant growth and powdery mildew growth on plants and carbon filters. Unresolved, recirculated air in your filtration or HVAC system can spread the spores throughout the entire facility, and carbon can release mildew back into the airstream, potentially contaminating plants. To prevent these issues, you can install anti-microbial air filtration for inhibiting microbial growth.

SPHINX media makes this possible by inhibiting mold and mildew growth on the media. It kills 99.9% of mold and mildew spores as they come in contact with the media, which means they are removed permanently and won't be re-released into the air. As plants grow, they become more susceptible to diseases, so sterile air is critical. SPHINX has anti-microbial properties to help remove these contaminants and spores from the air.

Solution: SPHINX Yield+ Media, Puraward Filters, Clean Air Cabinet, Side Access Unit

BORN FROM THE LEADER IN GAS PHASE FILTRATION

Purafil's SPHINX line offers media and filter solutions for grow houses. Purafil has been innovating new medias, filters, equipment and monitoring solutions for 50 years, making it a trusted partner for protecting communities from toxic gases and odors released by water treatment facilities while ensuring productivity at manufacturing plants and indoor grow houses. With the introduction of the SPHINX brand, we will now be able to better serve the growing agricultural market. Purafil's solutions truly are making the world safer, healthier and more productive.

SPHINX MEDIA ELIMINATES ODORS



CANADIAN GROW HOUSE CONTROLS ODOR WITH SPHINX

An expanding grow operation in New Brunswick was experiencing odor problems and sought out SPHINX to help control odors being released from their facility. While odor inside the indoor grow house wasn't a concern, the owners were worried about odors being exhausted out through their HVAC system into the surrounding community.

They had tried competing carbon-only filters, but they were failing after a few weeks. SPHINX and our local distributor worked with the business to provide a customized solution for this application. We used SPHINX's custom odor control media, which is engineered to remove a broader range of odors from grow house environments.

SPHINX's custom media allows for more complete odor elimination, and the odor control canisters are easy to integrate into the HVAC and exhaust systems.

For hemp facilities operating only where permitted and licensed under all applicable state and federal laws and regulations

SPHINXTM
GROW HOUSE AIR FILTRATION

SPHINX MEDIA ADVANTAGE

CUSTOMIZED BLENDS FOR GROW HOUSE OPERATIONS

When you need more removal capacity than carbon alone, turn to Purafil's specially engineered patented media blends. They permanently remove the odors and gases that carbon can't, providing a more complete odor control solution. This is done through chemisorption, a process that chemically transforms gases into harmless solids that remain trapped inside the media.

ABILITY TO COMPLETELY REMOVE TARGET ODOROUS GAS COMPOUNDS			
Odorous Gases by Detection Threshold	Activated Carbon	SPHINX Media	Low Odor Threshold (ppb)
		REMOVES 99.9% OF GROW HOUSE ODORS*	
Mercaptans		✓	0.0001
Sulfides		✓	0.04
Aldehydes		✓	0.3
Fatty Acids	✓	✓	0.4
Terpenes	✓	✓	1.8
Aromatic Compounds	✓	✓	2
Ketones		✓	2.1
Alcohols		✓	100
Halogen Compounds	✓	✓	500

DOMINANT STRAINS OF DAMAGING POWDERY MILDEW IN GROW CLIMATES:

- Sphaerotheca Macularis
- Leveillula Taurica
- Erysiphe Graminis
- Podosphaera Macularis

SPHINX MEDIA KILLS 99.9% OF POWDERY MILDEW

SPHINX patented media is proven by third party lab testing to kill 99.9% of mildew by destroying the cell walls through oxidation.

SPHINX ODOR MEDIA:

Perfect for terpene, aldehyde and odorous gas removal, patented SPHINX Odor media is the ideal solution for odor control in indoor cultivation facilities. It has an oxidizing agent that prevents mold and powdery mildew growth, thus protecting your plants and yield. Unlike activated carbon, SPHINX Odor media filters 99.9% of odorous gases from grow houses, including thiols and aldehydes. You truly do get broad spectrum removal of odorous gases.

SPHINX YIELD+ MEDIA:

Maximize your yield and provide customers with a high-quality product by ensuring healthy plants free from mold and mildew. Patented SPHINX media makes this possible by inhibiting mold and powdery growth on the media, thus preventing the spores from entering back into the air stream. Unlike activated carbon our media kills the spores upon contact, so they won't be re-released. SPHINX media maximizes your yield by helping to ensure a healthy harvest.

SPHINX ODOR MAX MEDIA:

Purafil's patent pending SPHINX Odor Max media is a custom blend that provides the same full range removal of odorous gases, but provides double the filter life of competitor products. It has anti-microbial properties that inhibit mold and powdery mildew growth. Its unique properties also allow for optimal performance even in humid environments where carbon can't maintain performance. SPHINX Odor Max extends media life, which means less frequent replacement.

*Based on in-field gas sampling

**Also available in granular and extruded carbon

Purafil products and services are intended to be used only in compliance with activities that are permitted and licensed under all applicable state laws and regulations.

ADVANCED ODOR REMOVAL SOLUTIONS



SPHINX ODOR FAN

Mobile, lightweight canister utilizes a variety of SPHINX medias to remove odorous gases from grow house environments. Versatile and small enough for use in individual rooms. Available in light and heavy sizing for a more customized solution. Has a low pressure drop and consistent performance.

USED FOR:

- ✓ ODOR CONTROL
- ✓ INCREASED YIELD
- ✓ PREVENTS POWDERY MILDEW

IN ROOM CONTROL:

- ✓ CULTIVATION ROOMS
- ✓ PROCESSING ROOMS



SPHINX CLEAN AIR CABINET (CA)

Medium-sized, self-contained air purification system. Filters room air to maintain low odor levels in grow house applications. Two separate passes of media allow for more targeted gas removal. Available in four horizontal and four vertical configurations, ranging from 500-4,000 CFM.

USED FOR:

- ✓ ODOR CONTROL
- ✓ INCREASED YIELD
- ✓ PREVENTS POWDERY MILDEW

IN ROOM CONTROL:

- ✓ PROCESSING ROOMS



Odor Drum

Constructed of corrosion-resistant materials and requiring essentially no maintenance, the Odor Drum is bulk filled for longer service life and is easy to install. Airflows up to 1,000 CFM.

USED FOR:

- ✓ ODOR CONTROL
- ✓ INCREASED YIELD
- ✓ PREVENTS POWDERY MILDEW

IN ROOM CONTROL:

- ✓ CULTIVATION ROOMS
- ✓ PROCESSING ROOMS



PURAFIL® SIDE ACCESS SYSTEM (PSA)

Modular system design features insulated double-walled construction. Can also be used as a filter in a recirculation application. Larger solution for heavy odor removal. Tracked for MediaPAK™ modules, which allows for easy replacement. Airflows of 250-50,000 CFM.

USED FOR:

- ✓ ODOR CONTROL
- ✓ PREVENTS POWDERY MILDEW

LARGE AREA CONTROL:

- ✓ BUILDING HVAC SYSTEMS



Deep Bed Scrubber (DBS)

The Deep Bed Scrubber contains up to four, 12-inch deep, vertical media beds. This multi-bed design ensures extended contact time with odorous contaminants and the highest removal efficiency. Airflows up to 40,000 CFM.

USED FOR:

- ✓ ODOR CONTROL
- ✓ PREVENTS POWDERY MILDEW

LARGE AREA CONTROL:

- ✓ BUILDING HVAC SYSTEMS

ADVANCED ODOR REMOVAL FILTERS

REPLACEMENT FILTERS

SPHINX PuraGRID Filters



Made of extruded monolithic blocks, consisting of many small parallel cells or channels. Supplies a large amount of chemical filtration with minimal pressure drop. Full media utilization and no bypass. An effective solution for broad range removal of odors and gases. Works in a variety of HVAC systems.

- Media Loading: Up to 21 lbs.
- Pressure Drop 2": 0.29 iwg
- Pressure Drop 4": 0.58 iwg

SPHINX V-Bank



Uses high-impact plastic frame with a built-in header for strong, lightweight housing. Ideal for odor control where higher levels of gases and contaminants would overwhelm a particulate filter. Over 20 pounds of media in a 24x24x12 filter. Works with a variety of SPHINX medias.

- Media Loading: Up to 28 lbs.
- Pressure Drop: 0.36 iwg

SPHINX Canisters



Ideal for high concentrations of gases. Provides 90%+ removal efficiency in makeup and recirculation air handling units. Features low bypass and a high-capacity design. Works with a variety of SPHINX medias.

- Media Loading: Up to 90 lbs.
- Pressure Drop 9": 1.75 iwg
- Pressure Drop 18": 0.42 iwg
- Pressure Drop 24": 0.18 iwg

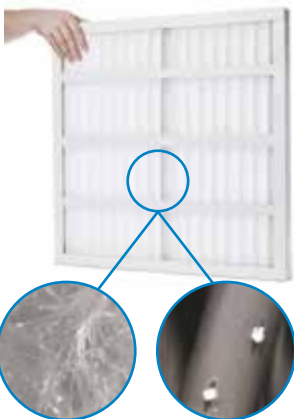
SPHINX Modules



Designed for high concentrations of gases found in grow houses. Provides even air distribution across media, with 90%+ removal efficiency in makeup and recirculation air applications. Low bypass, low pressure drop. Works with a variety of SPHINX medias.

- Media Loading: Up to 200 lbs.
- Pressure Drop PK12: 0.6 iwg
- Pressure Drop PK18: 0.49 iwg

Puraward Filters



Filters made with a non-woven high-efficiency fiber embedded with antimicrobial technology. Copper and silver ions jointly attack damaging mold, spores, viruses, and bacteria cells for up to 99.99% effectiveness. Non-hazardous with no off-gassing or leaching.

SPHINX Fresh Sachets



Durable, water-resistant, gas permeable packet that utilizes SPHINX patented media. Preserves freshness and shelf life of plants during shipping and storage. Non-toxic, non-hazardous materials that inhibit bacterial or powdery mildew growth.