



# PARTICULATE AND GASEOUS SOLUTIONS

**AmericanAirFilter®**

## **Gas-Phase Filtration**

*Advanced Solutions for the Removal of Airborne  
Particulate and Gaseous Contaminants*

*Better Air is Our Business®*



# AmericanAirFilter®

## Gas-Phase Filtration

### Industry Leader

#### Our Qualifications

*AAF International is the name recognized globally for quality, expertise, and innovation in air filtration. AAF International makes a wide variety of products for removing and controlling airborne particulates and gaseous contaminants. Because the need for clean air is universal, AAF designs air filter products for use in all types of air filtration systems, regardless of the original manufacturer. The scope of applications is unlimited and ranges from ultra-clean air for electronics and pharmaceutical manufacturing, to preventing the spread of infection in hospitals, to removing odors and harmful gases in occupied spaces. We protect people, processes, and systems every minute of every day.*

*AAF International is a company with an outstanding industry record. We have provided clean air for more than 85 years. The diversity of our customers' air filtration requirements has given us the expertise to provide products and systems, based on a broad industry perspective. Superior industry knowledge and an outstanding team of indoor air professionals mean our customers receive top quality products and services at a competitive price.*

#### A Proud History

AAF International traces its roots to Bill Reed, a skilled engineer and clever entrepreneur who recognized in 1921 that cleaning the air was critical to the growth of society, the development of technology, and the protection of human health. Through the years, the corporation has endured a world war and a cold war, depressions, recessions, natural and man-made disasters, political and social upheaval, and leaps in technology that could not be dreamed in 1921. Still today, the brand names AAF® and AmericanAirFilter® remain benchmarks for quality and performance in air filtration. Through all of the changes, we have seen in more than 88 years in business, nothing has distracted us from our mission – *Bringing Clean Air To The World!*®

From its world headquarters in Louisville, Kentucky, AAF maintains operations in 22 countries and more than 2,600 employees worldwide. AAF is supported in its international ventures through the resources of its parent company OYL Industries Berhad, based in Malaysia. OYL is owned by Daikin Industries Ltd., Osaka, Japan, a diversified international manufacturing company and a global leader in air conditioning.

Throughout its rich history, AAF's filtration experts have created and developed many of the filtration products and equipment being used in the industry today. We have been a key innovator in air filtration, and we continue to place great emphasis on research and development to meet the increasing demand for clean air.



AAF corporate headquarters, Louisville, Kentucky.



#### Innovative Product Line

AAF has assumed an industry leading position with the development of its innovative SAAF™ (pronounced as "SAFE") product line designed to reduce or eliminate harmful gaseous contaminants. In combination with our expertise in airborne particulate filtration, SAAF products allow us to develop unique and effective total filtration solutions to protect people, processes, and equipment.

The SAAF product line features these patent-pending solutions:

- Energy-efficient chemical media cassettes that fit our newly designed Side and Front Access Housings. These cassettes also fit in most legacy units. The housings are designed for quiet operation and durability.
- Complete media line - adsorbents, oxidants, and blends configured by and produced under the supervision of our world-class global research and development teams.
- ISA Standard S71.04: Environmental Conditions for Process Measurement and Control Systems: Airborne Contaminants and on-site testing to determine the exact nature of the contaminants and their relative concentrations.
- Comprehensive, industry-leading software, SAAF Tech Tools analyzes applications, develops solutions, configures equipment and media, and delivers a complete technical proposal.

No other company offers this combination of experience, expertise, innovation, and capability to combat airborne contaminants, particulate and/or gaseous, and deliver the clean air you require.

## Clean Air Technology



### Engineering Solutions

The Research & Development group is headquartered in Louisville, Kentucky, USA, with staff located in Europe and Asia. Each member of the group is committed to advancing the state-of-the-art in air filtration. R&D's role is to recognize emerging needs and anticipate future air filtration requirements, in order to provide solutions in a timely manner. Their accumulated years of experience, in synergy with a worldwide network of academic and industrial resources, ensure that AAF will always offer excellence in air filtration.

The Product Engineering staff is also located in Louisville, Kentucky, USA, and in key manufacturing facilities around the world. They are a team focused on current markets, with an objective of continuous improvement and services to provide maximum value to our customers. They also quickly adapt our products to meet short-term changes in filtration requirements as they arise in the marketplace.

### SAAF™ Technical Services

The SAAF Technical Services Group has the instrumentation and training to perform comprehensive evaluations and environmental assessments. All tests are carried out and correlated to applicable industry standards.

Evaluations include: particulate contamination assessments, gaseous contaminant assessments, humidity assessments, product life cycle assessments, room integrity verification, and sealing and HVAC circuit checks.



Select and compare chemical media and equipment solutions using SAAF™ Tech Tools decision-sciences software.

### SAAF™ Tech Tools

SAAF Tech Tools is the filtration industry's most sophisticated and complete decision-sciences software for configuring clean air solutions to remove airborne gaseous contaminants. SAAF Tech Tools allows the user to select the appropriate chemical media and equipment solutions by entering application specific data or by selecting from a vast library of pre-configured applications and typical concentrations of contaminants. SAAF Tech Tools provides design parameters and technical proposals that include a complete summary report, drawings, sales brochures, installation manuals, specifications, and MSDS sheets. The software is extremely flexible, providing for extensive customization and multiple solutions (if appropriate) to allow the user to configure the exact clean air solution required. All user input can be saved in a personalized library, with a user-designated title and password access protection.

SAAF Tech Tools also offers detailed information on contaminants, adsorbers, oxidants, and provides links to industry information relevant to the user's application and suggested solution.

## Quality and Service

### Quality Control, Operations, and Manufacturing Standards

AAF maintains quality and manufacturing standards as a major cornerstone of its global strategy. Our quality control teams are present in every manufacturing facility. We are proud to display the various suppliers awards with which we have been credited. While ISO certification and quality compliance are important to us, it is consumer awards, such as the G.E. Global Quality Suppliers Award and Rolls Royce Best Manufacturer Award, that make us proud. It is assuring to see that our end-users value quality as much as we do.

AAF's Global Operations Teams, supported by skilled teams of industrial, manufacturing, and project engineers, work continuously to improve AAF's product reliability, quality, and global manufacturing practices.

### Service and Commitment

AAF is committed to an exceptional end-user product experience. AAF is the only air filter company with a direct sales force of factory-trained representatives. AAF's sales, service, and technical employees provide back-up and product support around the globe. All this, while making it easy to work with AAF.



AAF Lebanon, Indiana, USA.



AAF Wuhan, P.R. China.



AAF Emmen, The Netherlands.

## SAAF™ Airborne Molecular Contaminant (AMC) Chemical Media and Catalysts

SAAF AMC Chemical Media and Catalysts provide high efficiency filtration for effective removal of AMCs encountered in nuclear contamination, bio-hazard contamination, and chemical (gas) contaminated air streams. Media are available as SAAF Custom Blends and SAAF Gas Specific Solutions. Media are designed to safely deliver superior gas removal effectiveness on a variety of target gases. Media can be analyzed for precise remaining life analysis calculations. A variety of AAF energy efficient delivery

mechanisms are available to easily incorporate media into airflows. Powerful enough for high capacity industrial applications and mission-critical applications. SAAF AMC media and catalysts are designed for easy, cost-effective disposal solutions.

Brochure GPF-1-103



## SAAF™ Delivery Mechanisms

SAAF™ Delivery Mechanisms for AMC Chemical Media and Catalysts include deep beds, cassettes, cartridges, multiple-panel V-banks, pleated filters, and mini-pleat, high-efficiency gas removal filters. AMC delivery mechanisms can be easily incorporated into existing HVAC systems. Energy efficient, fail-safe delivery mechanisms hold SAAF AMC Chemical Media.

### SAAF™ Pleated Panel and Extended Surface Filters

AAF makes a variety of pleated and extended surface filters incorporating adsorbents for odor control.

#### AmerSorb™ P

Activated carbon pleated panel filter manufactured with a self-supporting activated carbon textile media, which is pleated and retained in a two-piece beverage board die cut. Available in 1", 2", and 4" depths. Suitable for commercial and light industrial odor control applications.

#### AmAir®/C, AmAir®/CPlus, AmAir®/CP, AmAir®/Oxi

Disposable carbon filters designed to provide odor and particulate control where light to moderate odor conditions exist. Available in pleats, panels, and pads. Simply install the filters as you would standard air filters and dispose of them when they are no longer effective. AmAir/C filters are an economical, quick fix solution to many odor problems. Available in 1", 2", and 4" depths. Rated UL Class 2. MERV 7 for pleated filters only.

Brochure GPF-1-247

#### VariCel® RF/C and RF/CPlus

Extended-surface, rigid air filters provide high efficiency removal of gaseous pollutants, odors, and particulates. Constructed with galvanized steel cell sides and plastic pleat spacers on the air-entering and air-leaving sides, these filters withstand the most demanding applications. The pleat spacers maintain the shape of the synthetic media pack and ensure that both the effectiveness and service life are maximized. Available in single-header and no-header models. Rated UL Class 2. MERV 8.

Brochure GPF-1-122

#### VariSorb™ HC

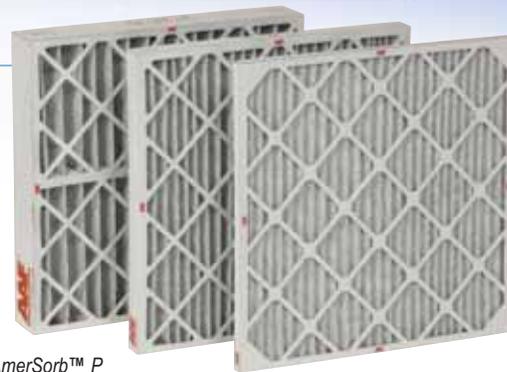
High capacity disposable filter consist of eight 1"-deep panels assembled in a V-bank configuration. Constructed of plastic, the filter features injection molded end panels made of high impact polystyrene (HIPS), and extruded vertical components made of acrylonitrile butadiene styrene (ABS). All assembly is with non-volatile materials. The sturdy, corrosion free construction resists damage during shipping, handling, and operation. The media is contained in panels with a honeycomb structure. A fine mesh scrim on both sides of the panel retains the media granules in the honeycomb. Available with SAAFCarb™, SAAFOxidant™ or SAAFBlend™ media.

Brochure GPF-1-126

#### VariSorb™ XL

Pleated compact filter consisting of mini-pleat filter elements in High-Impact Polystyrene (HIPS) cell sides for assembly in front, rear, or side-access track systems. The granular microstructure of the media packs ensures a much higher media area-to-weight ratio resulting in a high spontaneity adsorption and reaction. This makes the VariSorb XL very effective at removing medium and low concentrations of gas-phase contamination.

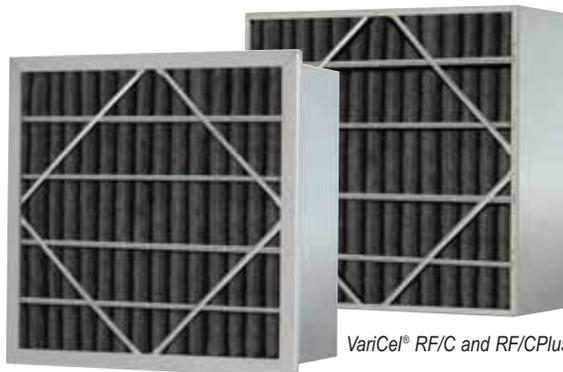
Brochure GPF-1-121



AmerSorb™ P



AmAir®/C, /CPlus, /CP, /Oxi



VariCel® RF/C and RF/CPlus



VariSorb™ HC

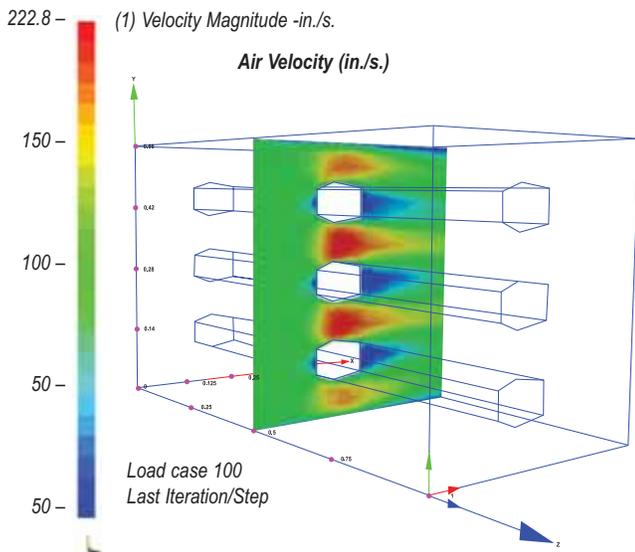
VariSorb™ XL

## SAAF™ Delivery Mechanisms (continued)

### SAAF™ Cassettes

SAAF V-bank Cassettes are constructed from High-Impact Polystyrene (HIPS) and come pre-filled with SAAF Chemical Media. Unique, patent-pending design ensures maximum media utilization and improves fit and sealing, even when deployed in older cassette holding systems. Computational Fluid Dynamics (CFD) modeling and performance tests confirm the most energy efficient design. The resulting design and construction surpasses any competitor's cassettes in the market, while allowing users a truly better design with value-enhancing features. No glue design eliminates problems from spills, off-gassing, bypass, and leakages. SAAF media cassettes are available in Heavy Duty (SAAF:HD), Medium Duty (SAAF:MD), and Cleanroom Grade (SAAF:CG). Filled cassettes are rated UL Class 2.

Brochures GPF-1-108, GPF-1-109, and GPF-1-111



Computational Fluid Dynamics (CFD) view of airflow through cassette screen. Screen ribs are designed to contain media while maximizing airflow exposure and promote complete utilization of media.

### SAAF™ Front Access Housings

SAAF Front Access Housings (SAAF:FAH) combine particulate filters and chemical media cassettes to remove both airborne particulate and gaseous contaminants from intake, re-circulated, or discharged ventilation air. Stand-alone system can be easily incorporated into new and existing air handling units; excellent for quick retrofit solutions. Housings can be stacked vertically or horizontally into filter banks for total system flexibility. Patent-pending SAAF Seal high integrity sealing system prevents bypass of contaminated air around the filter and ensures exceptional filter system efficiency. Energy efficient design reduces operating costs associated with air conditioning by allowing the maximum recirculation of tempered air.

Brochure GPF-1-115



SAAF™ Front Access Housings

# SAAF™ Gas-Phase Equipment

## SAAF™ Air Purification Systems

SAAF Air Purification Systems are stand-alone, multi-stage systems designed to remove particulate and gaseous contaminants from confined spaces, while reducing the amount of outside air needed to dilute contaminants. Air Purification Systems come equipped with an integral fan. Available as Recirculation Unit (SAAF:RU) and Pressurization and Recirculation Unit (SAAF:PRU), these systems are suitable for in-room use or sheltered outdoor installations. They require no special ducting or installation and use ultra-modern construction and options to allow easy blending with room's aesthetics. Patent-pending SAAF Seal high integrity sealing system prevents bypass of contaminated air around the filter and ensures exceptional filter system efficiency. Systems incorporate AAF's noise and vibration reduction technologies, variable flow capability, and smart controls for energy conservation. All units are double wall insulated construction to reduce noise and thermal transfer. Small footprint, easy installation and maintenance.

Brochure GPF-1-107

## SAAF™ Side Access Housings

SAAF Side Access Housings (SAAF:SAH) are designed to support chemical media cassettes, prefilters and after-filters, and high efficiency particulate filters in one self-contained unit for the removal of gas contaminants and airborne particulate. Housings offer the advantages of a conventional side access housing and maximum flexibility in the selection of chemical media and gas phase filter elements to remove contaminants from the air. Housings are available with an internal fan and in many different combinations and sizes to meet a wide range of applications. Patent-pending SAAF Seal high integrity sealing system prevents bypass of contaminated air around the filter and ensures exceptional filter system efficiency. Housings are double wall insulated construction to reduce noise and thermal transfer. Housings allow easy installation, operation, and maintenance.

Brochure GPF-1-106



SAAF™ Recirculation Unit



SAAF™ Side Access Housing

# AmericanAirFilter®

## Gas-Phase Filtration

### SAAF™ Gas-Phase Equipment (continued)



SAAF™ Machine Intake Filter System



SAAF™ Deep Bed System

#### SAAF™ Machine Intake Filter Systems

SAAF Machine Intake Filter (SAAF:MIF) Systems are designed to be state-of-the-art total air cleaning solutions to protect and prolong the life and performance of expensive, mission-critical systems, such as air compressors. Multi-stage systems are specifically designed for machinery air intakes in hostile air quality environments, such as industrial manufacturing facilities, mining, smelting, fuel processing, and pulp and paper processing. The SAAF:MIF systems provide the lowest operating pressure drop possible in air intake filtration options, while simultaneously combining high efficiency, high capacity filtration with fail-safe design that is proven through years of AAF's leadership within machinery intake filtration applications.

Brochure GPF-1-117

#### SAAF™ Deep Bed Systems

SAAF Deep Bed Systems are suitable for the most challenging applications where heavy particulate and Airborne Molecular Contaminant (AMC) loading is anticipated. These systems are workhorses and provide the largest media volume holding capacity and air-to-media ratios. Systems can be combined with AAF's patented technologies to provide air free of particulates and problem gases. SAAF Deep Bed Systems are available as Deep Bed Adsorbers (SAAF:DBA) and Deep Bed Scrubbers (SAAF:DBS).

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#### SAAF™ High Capacity PORTA-Scrubbers

SAAF High Capacity PORTA-Scrubbers (SAAF:HCPS) are an extremely low maintenance and quick solution for scrubbing high concentrations of odorous gases from low to moderate airflows. The PORTA-Scrubber is a quick portable solution for a variety of applications within the industry, e.g., sewage treatment plants and odor scrubbing in commercial kitchens or laboratory exhausts. The profile of this unique solution from AAF allows the user to utilize the capabilities of versatile innovative equipment for a multitude of uses. Combined with proprietary SAAF chemical media and AAF particulate offerings, these PORTA-Scrubbers are targeted for outdoor use applications that require long maintenance-free service.



SAAF™ High Capacity PORTA-Scrubber

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AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.

ISO Certified Firm

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