



Gas Phase Corrosion Control

2026 Edition



INTLM-B-GPCC-ST-E-V1-R0-2603

APPLICATIONS

APPLICATIONS	CONTAMINANTS
Airline Terminals	ETS, fumes, food odors
Air Raid Shelters	Multiple organics & inorganic
Animal Rooms	Urine, excreta, pet odors
Art Studios	Multiple organics & inorganic
Athletic Clubs	Body odors, Valerie Acid
Auditoriums	Formaldehyde
Banks (customer area)	Formaldehyde, multiple organics & inorganic
Banks (vault area)	Formaldehyde
Banquet Rooms	ETS, body odors, food odors
Barber Shops	ETS
Bars	ETS, body odors, perfume
Beauty Salons	Multiple organics & inorganic
Bingo Halls	ETS
Book Stacks	Multiple hydrocarbons
Brasseries	ETS, food odors, body odors
Bus Terminals	ETS
Cafeterias	ETS, kitchen fumes
Casinos	Multiple organics & inorganic
Chemical Storage Areas	ETS
Clinics	Multiple organics & inorganic
Cocktail Lounges	Multiple organics & inorganic
Conference Rooms	ETS, food odors
Darkrooms	ETS, body odors, furn off gassing
Decal Application Areas	Multiple organics & inorganic
Dentists' Offices	Multiple organics & inorganic
Dining Rooms	Multiple organics & inorganic
Doctors' Offices	Food odors, ETS
Drafting Areas (w/o BPM)	Multiple organics & inorganic
Drafting Areas (W/ BPM)	Multiple organics
Dry Cleaners (dust area)	Ammonia, multiple organics
Embalming Rooms	Multiple organics & inorganic
Factories (office area)	Formaldehyde, multiple organics
Fertilizer Plants (office)	ETS, furniture
Fish Markets	Ammonia, ETS
Fruit & Vegetable Storage Areas	Tri-Methyl Amine
Funeral Homes	Floral scents
Garbage Disposal Areas	Ethylene, multiple organics
Geriatrics	Body odors, furniture
Greenhouses	Ethylene, multiple organics
Grocery Stores	Multiple organics & inorganic, acidic compounds

APPLICATIONS	CONTAMINANTS
Hospitals	Multiple organics & inorganic, body odors
Hospitals (autopsy)	Formaldehyde
Hotels (smoking, renovation)	ETS, body odors, urine
Institutions (psychiatry)	ETS, body odors, urine
Intensive Care Units	Multiple organics & inorganic
Kitchen Exhausts	Odorous fumes
Locker Rooms	Multiple organics & inorganic from solvent, etc.
Libraries	Multiple hydrocarbons
Lounges	Body odors, Valeric Acid
Lunch Rooms	ETS
Meat Markets	Multiple odors, ETS, food
Morgues	Multiple organics & inorganic
Motels	Formaldehyde
Museums	Furnishings, ETS
Night Clubs	Multiple contaminants
Nurseries	ETS, body odors, perfume
Office Buildings	ETS, paint fumes, furniture
Paint Shops	Tilune, Xylene, multiple organics
Painted Rooms	Paint fumes
Penal Institutions	ETS, body odors
Pet Shops	Urine, animal odors
Pharmacies	Multiple contaminants
Photographic Studios	Multiple hydrocarbons
Physiotherapy	Multiple (oils & waxes)
Printing Plants	Hydrocarbons, ETS, food odors
Projection Booths	Hydrocarbons & ammonia
Psychiatric Wards	ETS, body odors
Public Toilets	Urine, excreta, body odors
Radio Studios	ETS
Recreation Halls	Multiple contaminants
Rendering Plants	Multiple organics
Restaurants	Food odors, ETS
Segregated Smoking Rooms	ETS, body odors, perfume
Storage Rooms	Multiple organics & inorganic
Stores	Multiple organics & inorganic
Television Studios	ETS, food odors, perfume
Theaters	ETS, food odors
Veterinary Hospitals	Animal odors, urine
Waiting Rooms	ETS

WHAT IS MAYAIR LOOSE MEDIA?

MayAir loose media is a proven filter media which provides continuous purification of corrosive, odorous and toxic contaminants in industrial and commercial environments.

MayAir loose media combines the adsorption properties of activated carbon with the oxidation properties of chemically impregnated alumina.

The MayAir loose media refers to four basic media types which have different chemical compositions:



PM108

The MayAir loose media PM108 is produced in 1/8" diameter spherical purple pellets and composed of activated alumina impregnated with potassium permanganate. The chemical reaction of the PM108 is very simple. The activated alumina collects odor molecules thereby come in contact with the potassium permanganate, which is evenly distributed throughout the pellets. The odor molecule is chemically oxidized to an odorless non-corrosive product.



PM760

The MayAir loose media PM760 is manufactured in 4mm diameter cylinders and consists of activated carbon impregnated with phosphoric acid. Phosphoric acid is impregnated into the carbon to provide enhanced efficiency and capacity for base type molecules. After adsorption, a chemical reaction follows to neutralize the contaminants.



PM660

The MayAir loose media PM660 consists of a coal based activated carbon of 4mm diameter cylinders. Physical adsorption removes the gas molecules, which is a form of condensation. Activated carbon is used for a wide range of contaminants with higher affinity to specific gases.



PM360

The MayAir loose media PM360 is manufactured in 4mm diameter cylinders and consists of activated carbon impregnated with potassium hydroxide. Potassium hydroxide is impregnated into the carbon to provide enhanced efficiency and capacity for acid type molecules. After adsorption, a chemical reaction follows to neutralize the contaminants.

A FORMULA FOR EACH APPLICATION

With various high efficiency MayAir loose media formulas available, MayAir can provide the best combination of physical and chemical characteristics to meet the specific needs of each application. Media can be impregnated with various chemical agents for selective performance.



INDUSTRIAL AND COMMERCIAL APPLICATIONS

MayAir loose media is used to control compressive gases such as SO₂, H₂S, CL₂ and NH₃, which attack delicate process control equipment in heavy industry. In light industry, it is used to eliminate malodorous and nuisance odors which affect people's health and well-being.

MayAir loose media is very efficient in the commercial and institutional sectors where air borne contaminants are created from human activities, operating equipment, furniture, construction materials and outdoor contaminants. A controlled environment will protect people's health and improve their comfort and productivity.

Suitable for:

- Outdoor air requiring purification.
- Recirculated air requiring filtration.
- Exhaust air requiring purification due to environmental regulations.



ADVANTAGES OF MAYAIR LOOSE MEDIA

VERSATILE

Adapts to multiple applications and air conditioning or filtration equipment, industrial and commercial, new or retrofit. Easy accommodation for future changes in building layout and/ or activities.

SIMPLE & RELIABLE

Does not require complex maintenance procedures.

ENERGY SAVING

Utilizes recirculated air which reduces outside air requirements.

HIGH EFFICIENCY

High removal efficiency in multiple contaminant environments.

HIGH REMOVAL CAPACITY

Deep bed equipment configurations are available for



PHYSICAL PROPERTIES

1.	Superior Crush Strength	Due to proprietary production procedures. MayAir loose media pellets are uniform and of a high crush strength. Their dusting threshold is higher, thus abrasion loss is kept to a minimum.
2.	Superior Pore Structure	Continuous advances in production procedures has resulted in the highest possible level of media porosity. This provides more vacancy for the migration of contaminants, higher sustained efficiency and longer effective life.
3.	Superior Retentivity	MayAir loose media do not depressor contaminants under surge conditions or sudden temperature/ humidity change.
4.	Temperature Range	From: -40°F to 120°F
5.	Humidity Range	From 10% to 95%
6.	Contamination Concentration	From 0 to 25ppm

MAYAIR LAB PROGRAM

Analytical follow-up through our Lab Program offered by MayAir. To ensure maximum efficacy establishing media consumption rate and performer.

PACKAGING

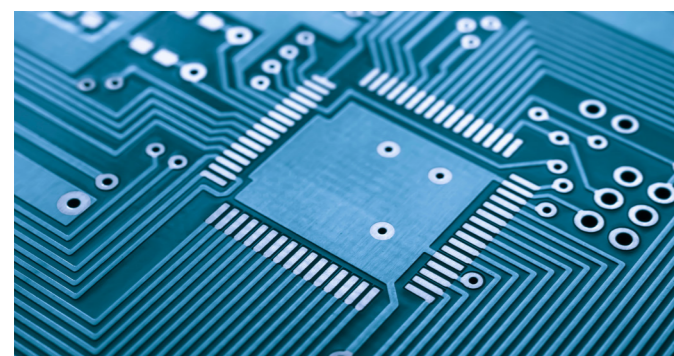
MayAir loose media is packaged in a cubic foot carton boxes or in media bags upon request.





INTRODUCTION TO MICROELECTRONICS INDUSTRY

Microelectronics technology is a discipline that deals with tiny integrated circuit systems on semiconductors. The development of integrated circuits relies on the continuous evolution of semiconductor devices. Microelectronics technology operates within nano-sized areas on solid-state materials, utilizing the microscopic movement of electrons to process and transmit information, demonstrating excellent integration capabilities. At its core, microelectronics technology revolves around integrated circuits, which have evolved through the development of various semiconductor devices. In the era of digitization, microelectronics technology has significantly impacted human production and daily life.



INTEGRATED CIRCUIT IC

With the critical reduction in semiconductor chip key lines over the past 50 years, the technology nodes of integrated circuits have significantly decreased from 10 micrometers (μm) in 1971 to the current 7 nanometers (nm) and are even pushing towards smaller nodes like 3nm. Chip manufacturing increasingly demands higher cleanliness standards. Almost every central stage in the integrated circuit industry, from single-crystal silicon wafer manufacturing to IC fabrication and packaging, needs to be completed in cleanrooms with extremely high cleanliness requirements. Relying solely on controlling particulate matter is no longer sufficient to improve yield; airborne molecular contamination (AMC) has gradually replaced particulate pollution as one of the critical factors affecting process yields in the industry. The control technology of AMC has become a necessary means to improve semiconductor yields.

FLAT PANEL DISPLAY FPD

Flat Panel Displays (FPDs) are classified according to the display medium and working principle, including Liquid Crystal Display (LCD), Plasma Display (PDP), Electroluminescent Display (ELD), Organic Electroluminescent Display (OLED), and others.

The production of displays also needs to be completed in clean rooms, requiring strict control of particulate matter and gaseous molecular contamination (AMC) concentrations to improve yield.



PHOTO VOLTAIC AND ELECTRONIC CIRCUIT TECHNOLOGY

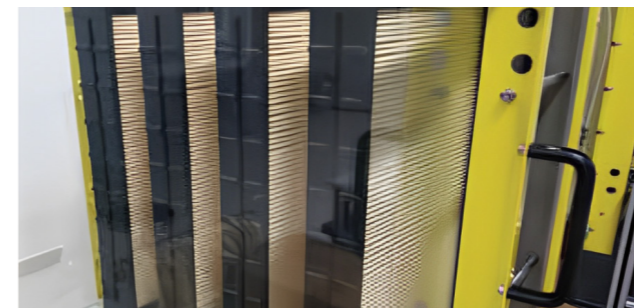
Thin-film photo voltaic (PV) cell technology, due to its high solar energy conversion efficiency and low cost, has gradually replaced traditional technologies in recent years, becoming mainstream in the photo voltaic industry. Based on materials, it can be categorized into crystalline silicon solar cells, amorphous silicon solar cells, polycrystalline silicon solar cells, copper indium selenite solar cells, and others.

Electronic circuit technology mainly falls into three categories: Printed Circuit Boards (PCB), Printed Circuit Board Assembly (PCBA), and Substrate Packaging (SUB). All of these technologies also require implementation in clean rooms, and the control of particulate matter and gaseous molecular contamination (AMC) significantly affects the yield of each respective process.



PRE-SHIPMENT TESTING OF FILTER SCREENS

The factory is equipped with specialized testing instruments. Prior to the chemical filters leaving the factory, tests can be conducted including pressure loss testing of chemical filter screens, initial removal efficiency testing, VOC (Volatile Organic Compounds) gas analysis, inorganic gas analysis, and analysis of particle shedding.



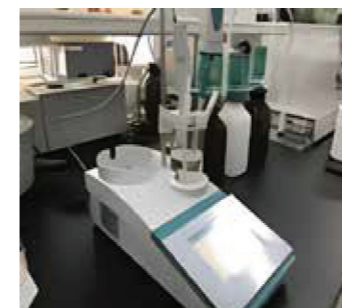
Chemical filter pressure drop test, initial removal efficiency test, VOCs emission analysis, inorganic emission analysis.



Particle Shedding

FILTER MEDIA TESTING

MayAir laboratory is equipped with professional testing instruments capable of analyzing the physical properties of activated carbon raw materials, such as CTC value, iodine value, pH, moisture content, particle size, and bulk density.



LABORATORY INSTRUMENTS

In addition to small and portable testing devices, MayAir has also established its own professional laboratory equipped with specialized sampling and analysis instruments, providing clients with sampling analysis services.



(ATD-GC/MS)
Automatic Thermal Desorption-Gas Chromatography/Mass Spectrometry Coupling Instrument



Ion Chromatography Instrument (IC)



Sampling Pump

COMMON TYPES OF AMC (AIRBORNE MOLECULAR CONTAMINATION)

The International Semiconductor Equipment and Materials Association (SEMI) categorizes AMC (Airborne Molecular Contamination) into four classes in the SEMI F21-1102 standard, as shown in the table below:

AMC Type	Type of Gas		Gas Source	Types Of Chemical Filters		Analytical Test Methods	
	Name	Formula		Application of AHU/MAU	Application of FFU		
Acidic (Ma)	Hydrogen Fluoride	HF	Cleaning Fluid	Puro-C, Puro-T, Ct	Puro-F, Puro-V, Puro-R	Ion Chromatographic (Integrated Analysis)	
	Fluoride Ion	F					
	Hydrogen Chloride	HCL					
	Chloride	CL-	Sea Water			Substance Burning Boiler Car Exhaust	No _x Meter
	Nitrogen Oxides	NO _x					
	Nitric Oxide	NO					
	Nitrogen Dioxide	No ₂					
	Nitrite Ion	NO ₂ -					
	Nitrate Ion	NO ₃					
	Sulfur Oxides	SO _x	Combustion Of Coal and Oil Volcanic Mineral Deposits			So _x Meter	
	Sulfur Dioxide	SO ₂					
	Sulfate Ion	SO ₄ ²⁻					
	Phosphate Ion	PO ₄ ³⁻	Fertilizer			Ion Chromatography Ic	
	Formate Ion	HCOO	Chemical Raw Materials				
Acetate Ion	CH ₃ COO						
Hydrogen Sulfide	H ₂ S	Volcanic Mineral Deposits Proteolysis	Gas Chromatographygc				
Alkaline (Mb)	Ammonia	NH ₃	Excretion Of Humans And Animals	N _h 3 Meter, Ion Chromatography Ic			
	Trimethylamine	(CH ₃) ₃ N	Fertilizer C ₂ h ₆ o		Ion Chromatography Ic (Integrated Analysis)		
Condensability (Mc)	Ethanol	C ₂ H ₆ O	Cleaning Fluid	Gc-Ms Chromatography/ Mass Spectrometry (Adsorption Tube Collection)			
	Acetone	C ₃ H ₆ O					
	Toluene	C ₇ H ₈	Silicone Sealant				
	Phosphate	PO ₄ ³⁻	Plasticizer				
Doping (Md)	Boron	B	Glass fiber	Icp-Ms			
	Phosphorus	P	Mineral				
Organic Gas	Low Boiling Point (Below 150°C)	Alcohol, acetone, toluene, and other gases; various solvents	Cleaning solution	Puro-C, Puro-T, Ct	Puro-F, Puro-V, Puro-R	Hydrocarbon Table, Gc-Ms Chromatography/ Mass Spectrometry Analysis	
	Moderate Boiling Point (150°C-300°C)	Siloxane, phosphoric acid BHT	Silicon wafer sealing material, aging protection material				
	High Boiling Point (Above 300°C)	Phosphate esters, phosphates	Non-combustible plastic material				

AMC CATEGORIZATION

The International Semiconductor Equipment and Materials Association (SEMI) categorizes AMC (Airborne Molecular Contamination) into four classes in the SEMI F21-1102 standard, as shown in the table below:

Classification	Describe
MA Molecular Acids	Chemical corrosive gaseous substances capable of accepting electrons (acceptors).
MB Molecular Bases	Chemical corrosive gaseous substances capable of donating electrons (donors).
MC Molecular Condensables	Gaseous substances capable of condensing on clean surfaces at room temperature and pressure.
MD Molecular Dopants	Gaseous substances capable of altering the conductivity of semiconductor materials.

CONCENTRATION CONVERSION RELATED

There are two methods to represent pollutant concentrations in the atmosphere:

(1) Mass concentration, which denotes the mass of pollutants per cubic meter of air (mg/m³)

$$\text{mg/m}^3 = \mu\text{g/L}$$

$$\mu\text{g/m}^3 = \text{ng/L}$$

$$\text{ng/m}^3 = \text{pg/L}$$

(2) Volume concentration, which represents the volume of pollutants in one million volumes of air (ppm)

$$1 \text{ ppm (parts per million)} = 1 \times 10^{-6}$$

$$1 \text{ ppb (parts per billion)} = 1 \times 10^{-9}$$

$$1 \text{ ppt (parts per trillion)} = 1 \times 10^{-12}$$

Using mass concentration units (mg/m³) as a method to represent air pollutant concentration can facilitate calculating the actual amount of pollutants. However, mass concentration is affected by the temperature and pressure conditions of the gas being measured, causing the values to vary with changes in environmental conditions like temperature and atmospheric pressure. Real measurements require simultaneous measurement of the gas's temperature and atmospheric pressure. In contrast, when using ppm to describe pollutant concentration, as it involves a volume ratio, this issue does not arise.

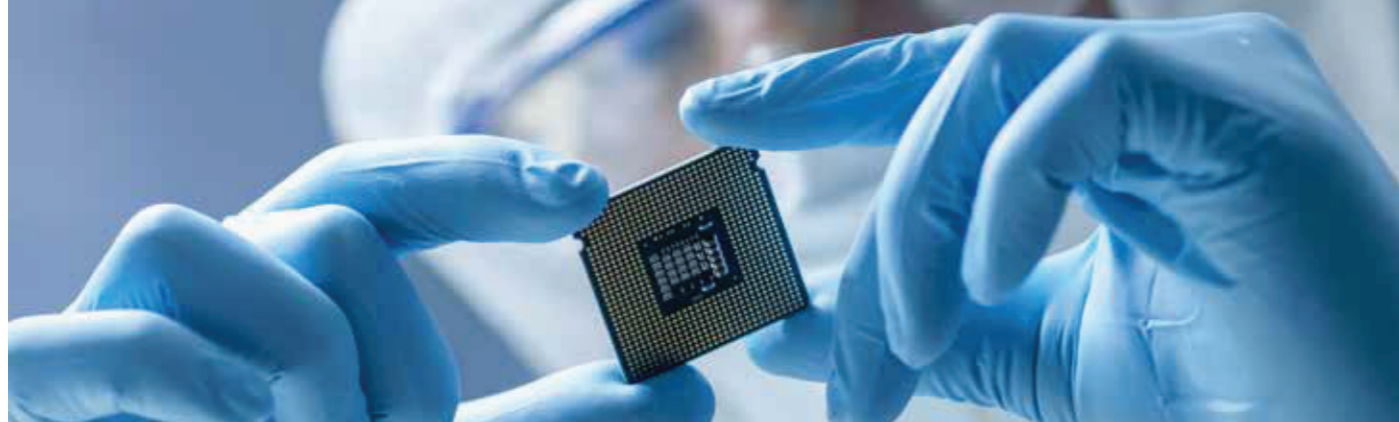
Conversion between concentration units μg/m³ and ppb:

$$Y(\mu\text{g/m}^3) = X(\text{ppb}) \times M / 22.4 / K$$

$$K = (273 + T) / 273$$

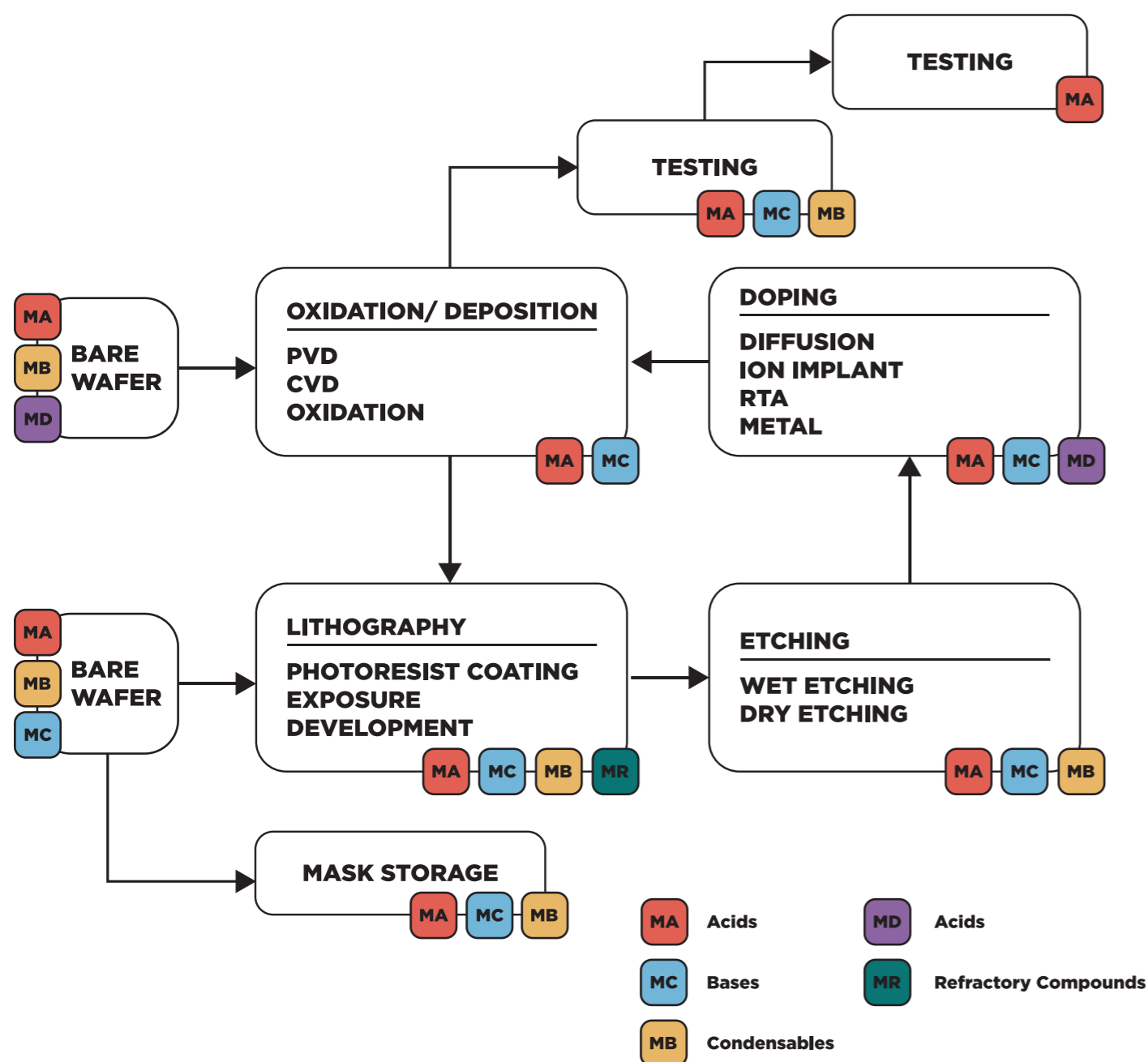
Under conditions of 101325 Pa and 23°C, the conversion of gas concentrations is as follows:

Chemical Name	Gas Molecular Weight (M)	1 ppb > Y μg/m ³	1 μg/m ³ > X ppb
F-	19.0	0.78	1.28
Cl-	35.5	1.46	0.68
NO ₂	46.0	1.89	0.53
NO ₃	62.0	2.55	0.39
So ₄ ²⁻	96.0	3.95	0.25
B	10.8	0.44	2.25
NH ₄ ⁺	18.0	0.74	1.35
C ₆ H ₅ CH ₃	92.0	3.79	0.26



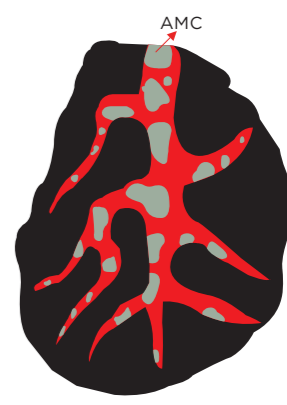
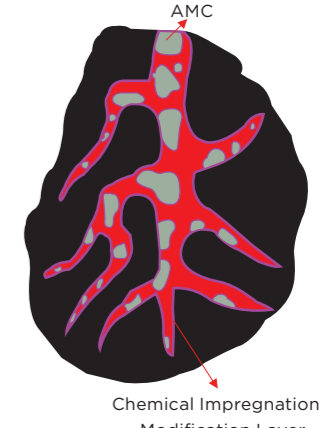
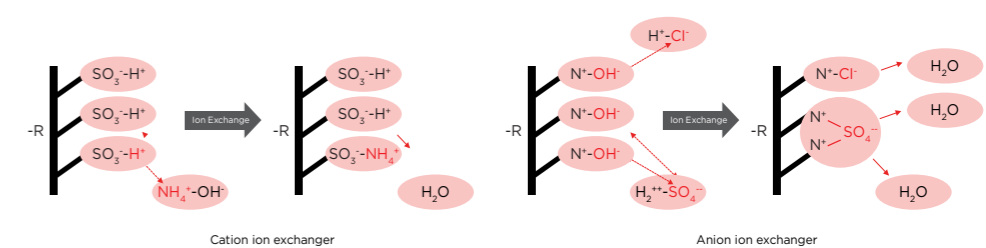
AMC CONTROL IN THE FRONT-END SEMICONDUCTOR MANUFACTURING PROCESS

In semiconductor manufacturing processes, the presence of airborne molecular contaminants (AMCs) can decrease product yield, making the control of AMCs crucial. For instance, controlling alkaline substances (MB) in the lithography area can prevent product T-topping defects. Similarly, maintaining doping materials (MD) in the doping area helps avoid uncontrolled B/P addition and threshold voltage (V_{th0}) drift. The following diagram lists the AMC species that need attention in the front-end semiconductor process.



FILTERING PRINCIPLE

The filtration mechanisms of chemical filters mainly include physical adsorption, chemical adsorption, and ion exchange adsorption. The principles are as follows.

Filtering Principle	Describe
Physical adsorption	<p>Physical adsorption occurs when the attractive forces between molecules on the surface of a solid and the molecules in a fluid (either gas or liquid) are more significant than the forces between the molecules within the fluid. In this phenomenon, fluid molecules are adsorbed onto the surface of the solid. The forces between the adsorbed fluid molecules and the surface molecules of the concrete are typically van der Waals forces.</p> <p>From a molecular motion perspective, the molecules adsorbed on the solid surface can detach and enter the gas (or liquid) due to molecular motion. This reversible process does not involve any chemical changes in the adsorbed molecules. Activated carbon, with its suitable surface structure, surface area, pore size, and distribution, exhibits strong adsorption capabilities due to physical adsorption.</p> 
Chemical Adsorption	<p>Chemical adsorption occurs when there is an electron transfer, exchange, or sharing between the adsorbate molecules and the atoms (or molecules) on a solid's surface, leading to the adsorption of chemical bonds. Due to the uneven force field on the solid surface, the surface atoms often have residual bonding capacity. When gas molecules collide with the concrete surface, electron exchange, transfer, or sharing occurs between the gas molecules and the surface atoms, forming adsorption chemical bonds.</p> <p>The strength of this chemical bond affinity can vary significantly but is generally much stronger than the van der Waals forces involved in physical adsorption. Additionally, chemical adsorption is often irreversible, and after desorption, the desorbed substance may undergo chemical changes, losing its original properties.</p> <p>Modifying the surface chemistry of activated carbon through methods such as chemical oxidation, reduction, or loading can alter its chemical composition. For example, increasing the relative content of acid or base groups on the modified activated carbon can make it selectively adsorb specific adsorbates and enhance its adsorption capacity for those substances.</p>  <p>Chemical Impregnation / Modification Layer</p>
MC Molecular Condensables	<p>Ion exchange resins are high-molecular-weight polymers with fixed and unchangeable polymer backbones attached to numerous functional groups. These functional groups can exchange ions in a reversible reaction. Based on the type of exchangeable ions, ion exchange resins are categorized into cation exchange resins and anion exchange resins. During the ion exchange process, functional groups (such as SO₃H) on the polymer backbone (-R) can dissociate and release exchangeable ions (such as the cation H⁺). The latter can freely move and diffuse into the solution on a larger scale.</p> <p>Simultaneously, ions of the same type from the solution (e.g., cation NH₄⁺) can also diffuse into the entire structure of the ion exchange resin. The concentration difference of these two ions propels the exchange between them.</p>  <p>Cation ion exchanger</p> <p>Anion ion exchanger</p>

MAYAIR LOOSE MEDIA

TYPE: PM108



MAYAIR LOOSE MEDIA

MayAir manufactures a wide variety of unique loose chemical filter media specially designed to remove an extensive range of contaminants from the air. MayAir loose chemical filter media, used either individually or in combination, provide continuous purification of air containing corrosive, odorous, and toxic contaminants in both commercial and industrial environments.

Activated Alumina Impregnated with Potassium Permanganate

MayAir PM108 media is a high surface area activated alumina pellet, impregnated through a special process with a 8% concentrated solution of potassium permanganate during its manufacturing. The result is a chemical filter with an elevated level of potassium permanganate giving superior performance in removing Hydrogen Sulfide (H²S), Sulfur Dioxide (SO²), Nitrogen Dioxide (NO²), Mercaptans, as well as light organics from air streams. MayAir PM108 media is a chemisorbent, filtering by adsorption and then oxidation, and has a low pressure drop due to its uniform size and spherical shape.

TYPICAL PHYSICAL PROPERTIES

Moisture	22 wt%
Compaction (minimum)	2.7 kg (6 lb.)
Particle Diameter	3.2 mm (1/8 in.)
Substrate Surface Area	250m ² g
Shape	Spherical Pellet
Apparent Density	0.88 g/cc (55 lb./ft ³)

PERFORMANCE SPECIFICATION

Hydrogen Sulfide	min. 20% by weight
Sulfur Dioxide	min. 8.5% by weight
Nitric Oxide	min. 2.5% by weight
Nitrogen Dioxide	min. 23% by weight
Formaldehyde	min. 2.5% by weight

PERFORMANCE GUIDELINES

MayAir PM108 media functions under the following conditions:

- Temperature: -20°C to 51°C (-4°F to 125°F)
- Humidity: 10% to 95% RH
- Airflow: Ranging from less than 25 cfm (42.5 m³/hr.) to over 100,000 cfm (169,920 m³/hr.), with velocities from 50 fpm (0.254 m/s) to 500 fpm (2.54 m/s)

ADVANTAGES

- Non-toxic and nonhazardous
- Non-describing
- MayAir laboratory testing and analysis available to determine remaining service life, through MayAir Lab Service
- Compatible with other MayAir loose media
- Does not support bacterial and fungal growth
- UL classified listed as nonflammable

SAFETY PRECAUTIONS

- Avoid contact with easily oxidization matter Keep away from heat and flammable materials
- Handle in a well-ventilated area
- Store in a cool, dry area, away from incompatible materials
- Always wear protective eye-wear and gloves when handling chemical media
- **Workers should follow federal, provincial/ state, and local safety guidelines when disposing of MayAir loose chemical media**
- Refer to Material Safety Data Sheet (M.S.D.S.) for further information

QUALITY CONTROL

MayAir PM108 loose media undergoes the following quality control tests before shipment:

- Potassium Permanganate Content
- Moisture Content
- Size Distribution
- Bulk Density
- Compaction
- ISO9001

PACKAGING

MayAir PM108 loose media is available in 1-cu. ft. boxes.

MAYAIR LAB SERVICE

MayAir Lab Service is offered on an ongoing basis to all its clients at no additional charge. Samples of MayAir loose chemical media, which are ideally taken quarterly from the client's filtration equipment, are sent to MayAir in-house ISO-Certified laboratory, where the media is analyzed for Life Expended.

Via a detailed report to the client, MayAir Lab Service not only provides a precise maintenance schedule, but also ensures the highest performance of MayAir equipment at the most economical cost.



MAYAIR LOOSE MEDIA

TYPE: PM660



MAYAIR LOOSE MEDIA

MayAir manufactures a wide variety of unique loose chemical filter media specially designed to remove an extensive range of contaminants from the air. MayAir loose chemical filter media, used either individually or in combination, provide continuous purification of air containing corrosive, odorous, and toxic contaminants in both commercial and industrial environments

Coal Based Activated Carbon

MayAir PM660 media is a pelletized activated carbon for removing a variety of odor-causing organic compounds and volatile organic compounds (VOC's) through physical adsorption. MayAir PM660 media is manufactured and activated from a unique bituminous coal substrate, with a low pressure drop and a high adsorptive removal capacity.

COMBINED PROPERTIES PERFORMANCE SPECIFICATION

Moisture (maximum)	≤5 wt%
Hardness (minimum)	≥90 wt%
Particle Diameter	4 mm
Substrate CTC (minimum)	≥60 wt%
Shape	Pellet
Apparent Density	470 - 500 kg/m ³
Ash Content (maximum)	≤15%

Toluene	min. 33% by weight
Trichloroethane	min. 20% by weight
Chlorine	min. 10% by weight
Nitrogen Dioxide	min. 6% by weight

PERFORMANCE GUIDELINES

MayAir PM660 media functions under the following conditions:

- Temperature: -20°C to 46°C (-4°F to 115°F)
- Humidity: No Condensation
- Airflow: Ranging from less than 25 cfm (42.5 m³/hr.) to over 100,000 cfm (169,920 m³/hr.), with velocities from 50 fpm (0.254 m/s) to 500 fpm (2.54 m/s)

ADVANTAGES

- Non-toxic and nonhazardous
- nonflammable
- Compatible with other MayAir loose media
- MayAir laboratory testing and analysis available to determine remaining service life, through MayAir Lab Service
- Does not support bacterial and fungal growth
- UL classified listed as nonflammable

SAFETY PRECAUTIONS

- Wet activated carbon readily adsorbs atmospheric oxygen. Dangerously low oxygen levels may exist in closed vessels or poorly ventilated areas. **Workers should follow federal, provincial/state, and local safety guidelines for entering oxygen-depleted areas Keep away from heat and flammable materials**
- Keep away from heat
- Store in a cool, dry area, away from incompatible materials
- **Workers should follow federal, provincial/state, and local safety guidelines when disposing of loose chemical media**
- Always wear protective eye-wear and gloves when handling chemical media
- Refer to Material Safety Data Sheet (M.S.D.S.) for further information
- Handle in a well-ventilated area

QUALITY CONTROL

MayAir PM660 loose media undergoes the following quality control tests before shipment:

- Butane Activity
- Moisture Content
- Bulk Density
- Size Distribution
- ISO9001

PACKAGING

MayAir PM660 media is available in 1-cu. ft. boxes.

MAYAIR LAB SERVICE

MayAir Lab Service is offered on an ongoing basis to all its clients at no additional charge. Samples of MayAir loose chemical media, which are ideally taken quarterly from the client's filtration equipment, are sent to MayAir in-house, ISO-Certified laboratory, where the media is analyzed for Life Expended.

Via a detailed report to the client, MayAir Lab Service not only provides a precise maintenance schedule, but also ensures the highest performance of MayAir equipment at the most economical cost.



MAYAIR LOOSE MEDIA

TYPE: PM760



MAYAIR LOOSE MEDIA

MayAir manufactures a wide variety of unique loose chemical filter media specially designed to remove an extensive range of contaminants from the air. MayAir loose chemical filter media, used either individually or in combination, provide continuous purification of air containing corrosive, odorous, and toxic contaminants in both commercial and industrial environments.

Activated Carbon Impregnated with Phosphoric Acid

MayAir PM760 media is a pelletized activated carbon impregnated with phosphoric acid for enhanced performance in removing basic gases, such as Ammonia (NH³), from air streams. MayAir PM760 media is a chemisorbent manufactured from a unique bituminous coal substrate, with a low pressure drop and a high adsorptive removal capacity.

COMBINED PROPERTIES

NH ³ Capacity (minimum)	4 wt%
Moisture (maximum)	20 wt%
Hardness (minimum)	95 wt%
Particle Diameter	4 mm
Substrate CTC (minimum)	60 wt%
Shape	Pellet
Apparent Density	~490 kg/m ³
Substrate Surface Area	≥1,000 m ² /g

PERFORMANCE SPECIFICATION

Ammonia	min. 5% by weight
Organic Amine	min. 10% by weight

PERFORMANCE GUIDELINES

MayAir PM760 media functions under the following conditions:

- Temperature: : -20°C to 51°C (-4°F to 125°F)
- Humidity: 10% to 95% RH
- Airflow: Ranging from less than 25 cfm (42.5 m³/hr.) to over 100,000 cfm (169,920 m³/hr.), with velocities from 60 fpm (0.305 m/s) to 500 fpm (2.54 m/s)

ADVANTAGES

- Nonhazardous
- Non-describing
- Media impregnated specifically to efficiently remove ammonia gas
- Compatible with other MayAir loose media
- MayAir laboratory testing and analysis available to determine remaining service life, through MayAir Lab Service
- Does not support bacterial and fungal growth
- UL classified listed as nonflammable

SAFETY PRECAUTIONS

- Wet activated carbon readily adsorbs atmospheric oxygen. Dangerously low oxygen levels may exist in closed vessels or poorly ventilated areas. **Workers should follow federal, provincial/state, and local safety guidelines for entering oxygen depleted areas**
- Keep away from heat
- Handle in a well-ventilated area
- Store in a cool, dry area, away from incompatible materials
- Always wear protective eye-wear and gloves when handling chemical media
- **Workers should follow federal, provincial/state, and local safety guidelines when disposing of loose chemical media**
- Refer to Material Safety Data Sheet (M.S.D.S.) for further information

QUALITY CONTROL

MayAir PM760 media undergoes the following quality control tests before shipment:

- Phosphoric Acid Content
- Moisture Content
- Size Distribution
- Bulk Density
- ISO9001

PACKAGING

MayAir PM760 media is available in 1-cu. ft. boxes.

MAYAIR LAB SERVICE

MayAir Lab Service is offered on an ongoing basis to all its clients at no additional charge. Samples of MayAir loose chemical media, which are ideally taken quarterly from the client's filtration equipment, are sent to MayAir in-house, ISO-Certified laboratory, where the media is analyzed for Life Expended.

Via a detailed report to the client, MayAir Lab Service not only provides a precise maintenance schedule, but also ensures the highest performance of MayAir equipment at the most economical cost.



MAYAIR LOOSE MEDIA

TYPE: PM360



MAYAIR LOOSE MEDIA

MayAir manufactures a wide variety of unique loose chemical filter media specially designed to remove an extensive range of contaminants from the air. MayAir loose chemical filter media, used either individually or in combination, provide continuous purification of air containing corrosive, odorous, and toxic contaminants in both commercial and industrial environments.

Activated Carbon Impregnated with Phosphoric Acid

MayAir PM360 media is a pelletized activated carbon impregnated with potassium hydroxide for enhanced performance in removing acid gases, such as Hydrogen Sulfide (H₂S), Sulfur Dioxide (SO₂), Chlorine (Cl₂), and Hydrochloric Acid (HCl) from contaminated air streams. MayAir PM360 media is a chemisorbent manufactured from a unique bituminous coal substrate, with a low pressure drop and a high adsorptive removal capacity.

PRODUCT SPECIFICATION

Moisture (maximum)	20 wt%
Hardness (minimum)	90 wt%
Particle Diameter	4 mm
Substrate CTC (minimum)	60 wt%
Shape	Pellet
Apparent Density	580 - 620 kg/m ³
Substrate Surface Area	900 m ² /g

PERFORMANCE SPECIFICATION

Hydrogen Sulfide	min. 20% by weight
Sulfur Dioxide	min. 10% by weight
Nitric Oxide	min. 2.6% by weight
Nitrogen Dioxide	min. 3% by weight
Chlorine	min. 10% by weight

PERFORMANCE GUIDELINES

MayAir PM360 media functions under the following conditions:

- Temperature: : -20°C to 51°C (-4°F to 125°F)
- Humidity: 10% to 95% RH
- Airflow: Ranging from less than 25 cfm (42.5 m³/hr.) to over 100,000 cfm (169,920 m³/hr.), with velocities from 50 fpm (0.305 m/s) to 500 fpm (2.54 m/s)

ADVANTAGES

- Non-toxic
- Non-describing
- MayAir laboratory testing and analysis available to determine remaining service life, through MayAir Lab Service
- Does not support bacterial and fungal growth
- UL classified listed as nonflammable

SAFETY PRECAUTIONS

- Wet activated carbon readily adsorbs atmospheric oxygen. Dangerously low oxygen levels may exist in closed vessels or poorly ventilated areas. **Workers should follow federal, provincial/state, and local safety guidelines for entering oxygen-depleted areas. Keep away from heat and flammable materials**
- Keep away from heat
- Store in a cool, dry area, away from incompatible materials
- **Workers should follow federal, provincial/state, and local safety guidelines when disposing of loose chemical media**
- Always wear protective eye-wear and gloves when handling chemical media
- Refer to Material Safety Data Sheet (M.S.D.S.) for further information
- Handle in a well-ventilated area

QUALITY CONTROL

MayAir PM360 media undergoes the following quality control tests before shipment:

- Potassium Hydroxide Content
- Moisture Content
- Size Distribution
- Bulk Density
- ISO9001

PACKAGING

MayAir PM360 media is available in 1-cu. ft. boxes.

MAYAIR LAB SERVICE

MayAir Lab Service is offered on an ongoing basis to all its clients at no additional charge. Samples of MayAir loose chemical media, which are ideally taken quarterly from the client's filtration equipment, are sent to MayAir in-house, ISO-Certified laboratory, where the media is analyzed for Life Expended. Via a detailed report to the client, MayAir Lab Service not only provides a precise maintenance schedule, but also ensures the highest performance of MayAir equipment at the most economical cost.



MAYAIR LOOSE MEDIA

TYPE: PM810



MAYAIR LOOSE MEDIA

MayAir manufactures a wide variety of unique loose chemical filter media specially designed to remove an extensive range of contaminants from the air. MayAir loose chemical filter media, used either individually or in combination, provide continuous purification of air containing corrosive, odorous, and toxic contaminants in both commercial and industrial environments.

PM108 / PM660 Blend

MayAir PM810 media is a 50/50 blend of PM108, activated alumina impregnated with 8% potassium permanganate, and PM660, coal-based activated carbon. MayAir PM810 media provides enhanced performance in controlling compounds usually controlled by PM108 and PM660. The combined benefits of both media are realized in one bed. Note that custom blends are available for specific applications. (Refer to the specifications for PM108 and PM660 for product description)

PERFORMANCE SPECIFICATION

Hydrogen Sulfide	min. 8% by weight
Sulfur Dioxide	min. 8.5% by weight
Toluene	min. 15% by weight
Nitrogen Dioxide	min. 23% by weight
Chlorine	min. 10% by weight
Formaldehyde	min. 2.5% by weight

PERFORMANCE GUIDELINES

MayAir PM810 media functions under the following conditions:

- Temperature: -20°C to 46°C (-4°F to 115°F)
- Humidity: 10% to 95% RH
- Airflow: Ranging from less than 25 cfm (42.5 m³/hr.) to over 100,000 cfm (169,920 m³/hr.), with velocities from 50 fpm (0.305 m/s) to 500 fpm (2.54 m/s)

ADVANTAGES

- Non-toxic and nonhazardous
- Non-describing
- MayAir laboratory testing and analysis available to determine remaining service life, through MayAir Lab Service
- Compatible with other MayAir loose media
- Does not support bacterial and fungal growth
- UL classified listed as nonflammable

SAFETY PRECAUTIONS

- Avoid contact with easily oxidization matter
- Keep away from heat and flammable materials
- Handle in a well-ventilated area
- Store in a cool, dry area, away from incompatible materials
- Always wear protective eye-wear and gloves when handling chemical media
- **Workers should follow federal, provincial/ state, and local safety guidelines when disposing of loose chemical media**
- Refer to Material Safety Data Sheet (M.S.D.S.) for further information

QUALITY CONTROL

MayAir PM810 media undergoes the following quality control tests before shipment:

- Potassium Permanganate Content
- Butane Activity
- Moisture Content
- Size Distribution
- Bulk Density
- ISO9001

PACKAGING

MayAir PM810 media is available in 1-cu. ft. boxes.

MAYAIR LAB SERVICE

MayAir Lab Service is offered on an ongoing basis to all its clients at no additional charge. Samples of MayAir loose chemical media, which are ideally taken quarterly from the client's filtration equipment, are sent to MayAir in-house, ISO-Certified laboratory, where the media is analyzed for Life Expended.

Via a detailed report to the client, MayAir Lab Service not only provides a precise maintenance schedule, but also ensures the highest performance of MayAir equipment at the most economical cost.



MAYAIR LOOSE MEDIA

TYPE: PM840



MAYAIR LOOSE MEDIA

MayAir manufactures a wide variety of unique loose chemical filter media specially designed to remove an extensive range of contaminants from the air. MayAir loose chemical filter media, used either individually or in combination, provide continuous purification of air containing corrosive, odorous, and toxic contaminants in both commercial and industrial environments.

PM840

MayAir PM840 media is a 50/50 blend of PM108 activated alumina impregnated with potassium permanganate, and PM360, coal-based activated carbon. MayAir PM840 media provides enhanced performance in controlling compounds usually controlled by PM108 and PM360. The combined benefits of both media are realized in one bed. Note that custom blends are available for specific applications.
(Refer to the specifications for PM108 and PM360 for product description)

PERFORMANCE SPECIFICATION

Hydrogen Sulfide	min. 20% by weight
Sulfur Dioxide	min. 10% by weight
Nitric Oxide	min. 5% by weight
Nitrogen Dioxide	min. 23% by weight
Chlorine	min. 10% by weight
Formaldehyde	min. 2.5% by weight

PERFORMANCE GUIDELINES

MayAir PM840 media functions under the following conditions:

- Temperature: -20°C to 51°C (-4°F to 125°F)
- Humidity: 10% to 95% RH
- Airflow: Ranging from less than 25 cfm (42.5 m³/hr.) to over 100,000 cfm (169,920 m³/hr.), with velocities from 50 fpm (0.305 m/s) to 500 fpm (2.54 m/s)

ADVANTAGES

- Non-toxic and nonhazardous
- Non-describing
- MayAir laboratory testing and analysis available to determine remaining service life, through MayAir Lab Service
- Compatible with other
- MayAir loose media
- Does not support bacterial and fungal growth
- UL classified listed as nonflammable

SAFETY PRECAUTIONS

- Avoid contact with easily oxidization matter
- Keep away from heat and flammable materials
- Handle in a well-ventilated area
- Store in a cool, dry area, away from incompatible materials
- Always wear protective eye-wear and gloves when handling chemical media
- **Workers should follow federal, provincial/ state, and local safety guidelines when disposing of loose chemical media**
- Refer to Material Safety Data Sheet (M.S.D.S.) for further information

QUALITY CONTROL

MayAir PM840 media undergoes the following quality control tests before shipment:

- Potassium Permanganate Content
- Butane Activity
- Moisture Content
- Size Distribution
- Bulk Den-sit
- ISO9001

PACKAGING

MayAir PM840 media is available in 1-cu. ft. boxes

MAYAIR LAB SERVICE

MayAir Lab Service is offered on an ongoing basis to all its clients at no additional charge. Samples of MayAir loose chemical media, which are ideally taken quarterly from the client's filtration equipment, are sent to MayAir in-house, ISO-Certified laboratory, where the media is analyzed for Life Expended.

Via a detailed report to the client, MayAir Lab Service not only provides a precise maintenance schedule, but also ensures the highest performance of MayAir equipment at the most economical cost.



MODULAR PACKED FILTER TYPE: MM-12



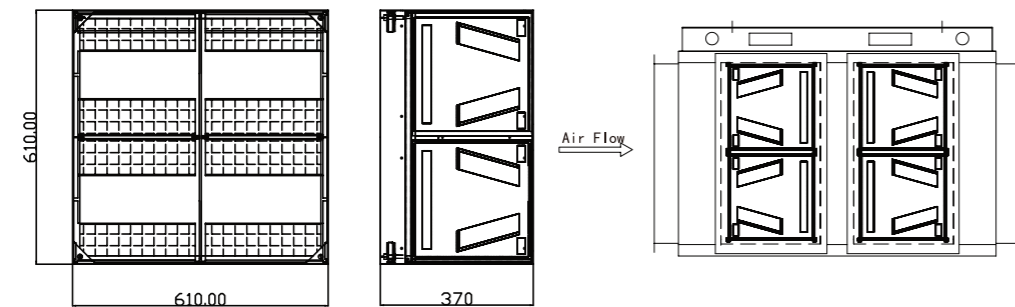
PRODUCT FEATURE

- Recommendation: ABS plastic integral molding, lightweight, corrosion-resistant
- Large loading capacity, long lifespan
- Compatible with various filter materials, can be repeatedly refilled
- Flexible installation, offering options for vertical or lateral mounting

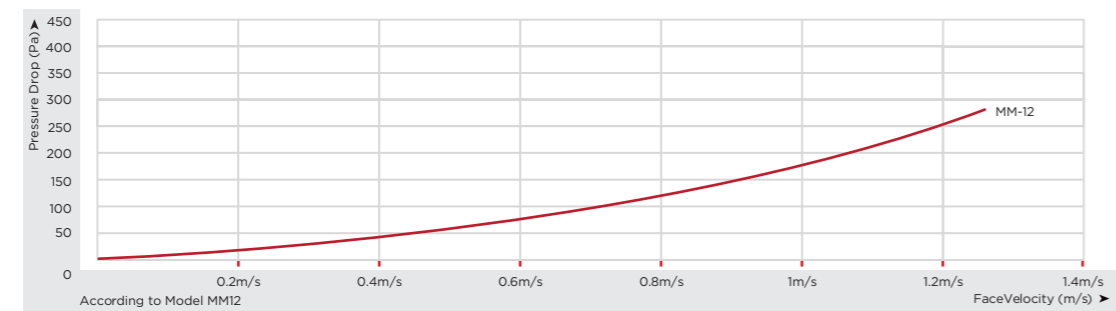
APPLICATION

- Semiconductor - Front-end Processes (AMC Control)
- Semiconductor - Backend Packaging and Testing Processes (Corrosion, Contamination, and AMC Control)
- Commercial Buildings - Offices and Public Structures (Corrosion and Air Quality Control)
- Industrial - Manufacturing Processes (Corrosion and Pollution Control)

PRODUCT STRUCTURE



GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW



TECHNICAL SPECIFICATIONS

Dimension	Filter Capacity	Filter Material Thickness	Air Flow	Initial Pressure Drop at 1.27m/s
WxHxD (mm)	(ft)	(mm)	(CMH)	(Pa)
300x295x298	0.5ft ³	76.2	425	324
600x295x298	1ft ³	76.2	850	324

MODULAR PACKED FILTER TYPE: MM-18



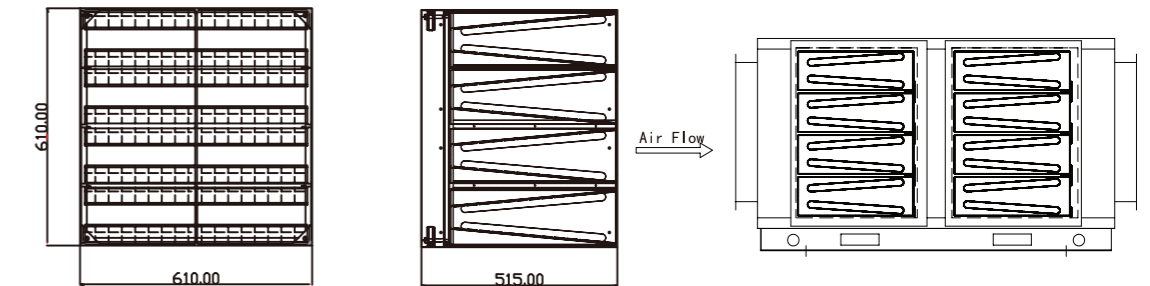
PRODUCT FEATURE

- Recommendation: ABS plastic integral molding, lightweight, corrosion-resistant
- Large loading capacity, long lifespan
- Compatible with various filter materials, can be repeatedly refilled
- Flexible installation, offering options for vertical or lateral mounting

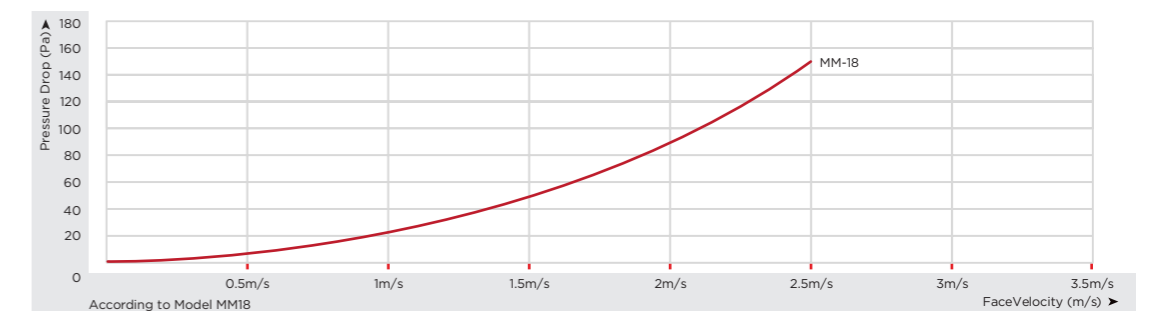
APPLICATION

- Semiconductor - Front-end Processes (AMC Control)
- Semiconductor - Backend Packaging and Testing Processes (Corrosion, Contamination, and AMC Control)
- Commercial Buildings - Offices and Public Structures (Corrosion and Air Quality Control)
- Industrial - Manufacturing Processes (Corrosion and Pollution Control)

PRODUCT STRUCTURE



GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW



TECHNICAL SPECIFICATIONS

Dimension	Filter Capacity	Filter Material Thickness	Air Flow	Initial Pressure Drop at 2.54 m/s
WxHxD (mm)	(ft)	(mm)	(CMH)	(Pa)
300x145x440	0.25ft ³	25.4	425	154
600x145x440	0.5ft ³	25.4	850	154

DRAWER-TYPE PACKED FILTER TYPE: PURO-T



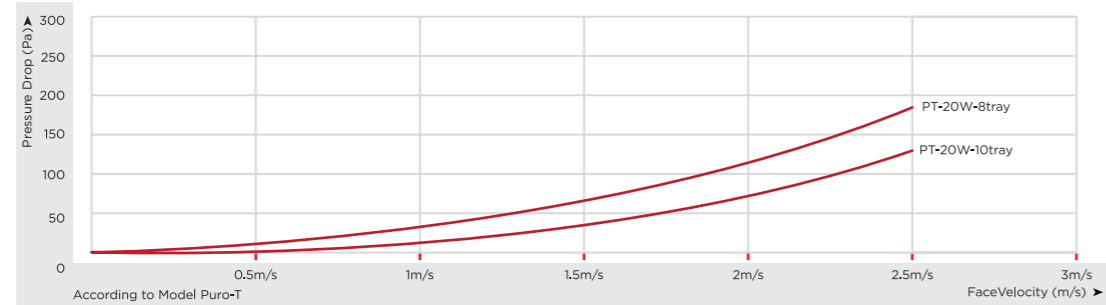
PRODUCT FEATURE

- Suitable for various types of filter materials
- Large filter loading capacity, long lifespan
- Stable pressure drop, no incremental pressure loss
- Easy system maintenance
- Improves and enhances indoor air quality

APPLICATION

- Semiconductor - Front-end Processes (AMC Control)
- Semiconductor - Backend Packaging and Testing Processes (Corrosion, Contamination, and AMC Control)
- Commercial Buildings - Offices and Public Structures (Corrosion Control and Air Quality Management)
- Industrial - Manufacturing Processes (Corrosion and Pollution Control)

GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW



TECHNICAL SPECIFICATIONS

Model	Dimension WxHxD(mm)		Air Flow (CMH)	Resistance (Pa)	Adsorbent Volume (ft³)
	Frame	Tray (Element)			
PT-20W-8tray	610x610x610	590x600x45	3,400	<180@2.5m/s	4.1
PT-20WH-8tray	610x305x610	590x295x45	1,700	<180@2.5m/s	2.0
PT-20W-10tray	610x610x610	590x600x30	3,400	<150@2.5m/s	3.4
PT-20WH-10tray	610x305x610	590x295x30	1,700	<150@2.5m/s	1.7
PT-20	610x610x420	410x600x36	3,400	<120@2.5m/s	2.2
PT-20H	610x305x420	410x295x36	1,700	<120@2.5m/s	1.1
PT-10	610x610x210	205x600x33	1,700	<80@2.5m/s	1.0
PT-20H	610x305x210	205x295x33	850	<80@2.5m/s	0.5

Note: The Puro-T filter has a frame material option of stainless steel, powder-coated cold-rolled steel, or galvanized steel. The pressure drop mentioned does not include the G4 pre-filter, and the actual pressure drop will depend on the type of adsorbent used. When adding a G4 pre-filter, the thickness of the filter increases by 20mm.

CYLINDRICAL PACKED FILTER TYPE: CT SERIES



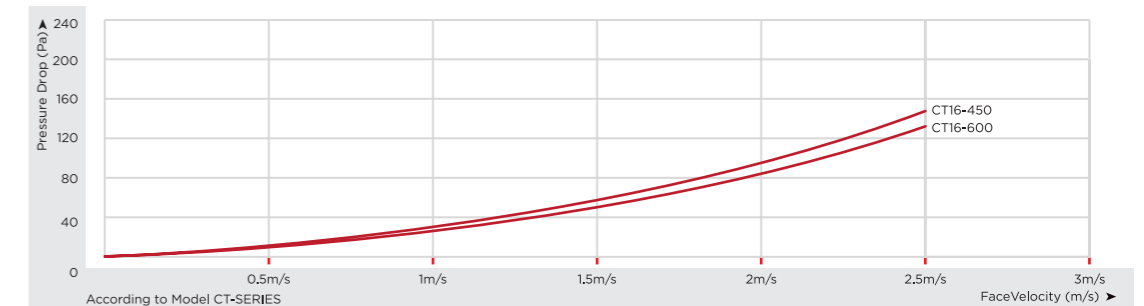
PRODUCT FEATURE

- Recommendation: ABS plastic integral molding, lightweight.
- Internally coated with mesh, preventing dust, corrosion-resistant, and fire-resistant.
- Low initial resistance, no incremental pressure loss.
- Compatible with different types of filter materials, refillable.
- Large filter loading capacity, long lifespan.

APPLICATION

- Semiconductor - Front-end Processes
- Semiconductor - Backend Packaging and Testing Processes (Corrosion, Contamination, and AMC Control)
- Commercial Buildings - Offices and Public Structures (Corrosion Control and Air Quality Management)
- Industrial - Manufacturing Processes (Corrosion and Pollution Control)

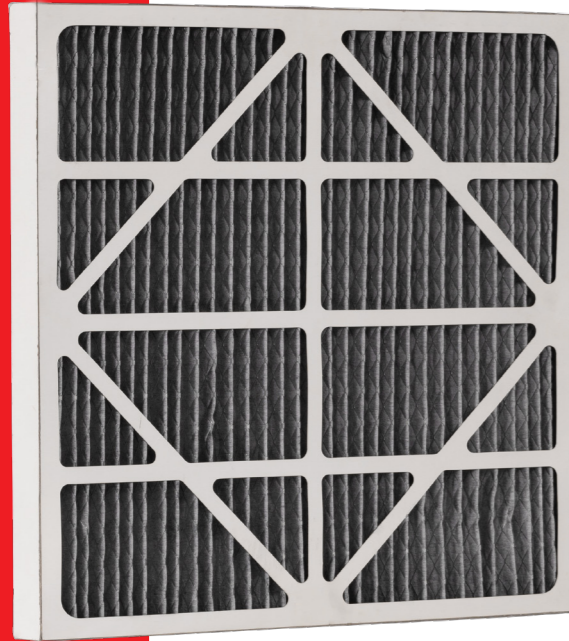
GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW



TECHNICAL SPECIFICATIONS

Model	Dimension WxHxD(mm)		Air Flow (CMH)	Resistance (Pa)	Filter Bed Depth (mm)	Number of Cylinder
	Frame					
CT16-450	610x610x450		3,400	<150@2.5m/s	25	16
CT8-450	305x610x450		1,700	<150@2.5m/s	25	8
CT4-450	305x305x450		850	<150@2.5m/s	25	4
CT16-600	610x610x600		3,400	<150@2.5m/s	25	16
CT8-600	305x610x600		1,700	<150@2.5m/s	25	8
CT4-600	305x305x600		850	<150@2.5m/s	25	4

PLEATED FILTER TYPE: PURO-P



PRODUCT FEATURE

The PURO-P (PP) series chemical filter products are designed for use in HVAC systems, specifically air handling units (AHUs). These products have a wide range of applications and can be used as a means of controlling gaseous molecular pollutants and gaseous corrosion.

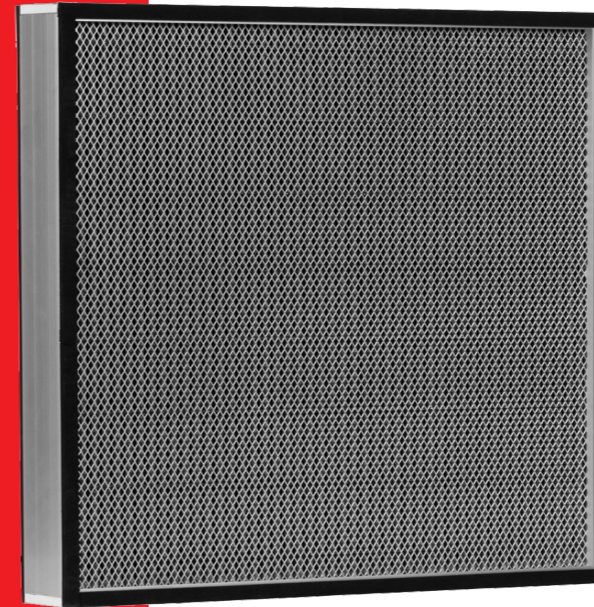
The PURO-P series products are chemical filters that can be used to improve air quality. They have a wide range of applications and can be used in conjunction with different HVAC systems to provide effective gaseous chemical filtration. These filters can be installed in ventilation and air conditioning systems, even in spaces with limited room.

TECHNICAL SPECIFICATIONS

Model	PP-A2	PP-B2	PP-C1	PP-D2
Standard Nominal Dimension (W x L x H mm)	594x594x44	594x594x44	594x594x44	594x594x44
Air Flow at 2.5 m/s (CMH)	3,400	3,400	3,400	3,400
Initial Pressure Drop (Pa)	<160 at 2.54m/s	<160 at 2.54m/s	<160 at 2.54m/s	<160 at 2.54m/s
Frame	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic
Media area (m ²)	2.5	2.5	2.5	2.5
Number of folds	53	53	53	53
Targeted Gaseous	Acid airborne molecule (F,Cl,NO _x ,SO _x ,H ₂ S)	Alkaline airborne molecule (NH ₃)	Condensable Gases (VOC)	Dopant (Boron, Phosphorus)

Remark: 1. The standard nominal dimensions mentioned above refer to the full-size Puro-P products.
2. The half-size Puro-P products have dimensions of W x H (width x height).
3. For customized sizes, please contact our sales representative for further information.

ULTRA-LOW PRESSURE DROP PLEATED FILTER TYPE: PURO-F

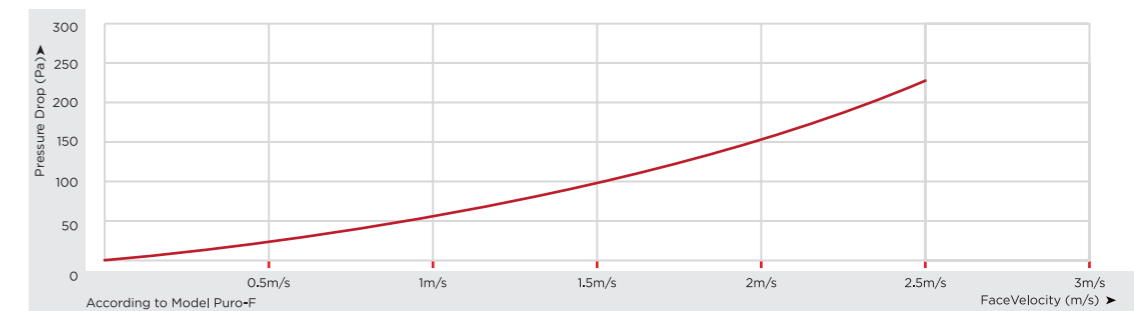


PRODUCT FEATURE

PURO-F (PF) is an FFU-style chemical filter that is designed to be used with a built-in fan filter unit (FFU) to provide effective gaseous molecular filtration. Puro-F can be combined with different filter media to remove acids, alkalis, organic compounds, boron, phosphorus, and more, in order to control airborne molecular contaminants (AMC).

The PURO-F series products are chemical filters designed for use with FFUs (Fan Filter Units). They provide excellent removal efficiency for airborne molecular contaminants (AMC), ensuring clean indoor air and helping to improve and enhance product quality. These filters can be combined with different types of chemical filter media to effectively remove AMC (as classified in SEMI F21-1102), addressing gaseous pollution concerns.

GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW



TECHNICAL SPECIFICATIONS

Model	PF-A2	PF-B2	PF-C1	PF-D2	PF-RC
Standard Nominal Dimension (W x L x H mm)	900x1100x70	900x1100x70	900x1100x70	900x1100x70	900x1100x150
Air Flow (CMH)	0-2400	0-2400	0-2400	0-2400	0-2400
Initial Pressure Drop (Pa)	<25@0.35m/s	<25@0.35m/s	<25@0.35m/s	<25@0.35m/s	60pa@0.35m/s
Frame	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic	Galvanized steel/ Aluminum/ Plastic
Media Area (m ²)	8.5	8.5	8.5	8.5	9.6
Face-Guard	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron
Gasket Thickness (mm)	5	5	5	5	5
Targeted Gaseous	Acid airborne molecule (F,Cl,NO _x ,SO _x ,H ₂ S)	Alkaline airborne molecule (NH ₃)	Condensable Gases (VOC)	Dopant (Boron, Phosphorus)	Refractory compounds (TMS,M2,D3)

Remark: 1. Pressure Drop Is Depending On The Type Of Adsorption Media.
2. Air Volume, Targeted Gaseous And Temperature May Affect The Removal Efficiency.
3. The above sizes are based on the standardized 4x4 FFU dimensions. For customized sizes, please contact our sales representative for further information.

BOX-TYPE PLEATED FILTER TYPE: PURO-C



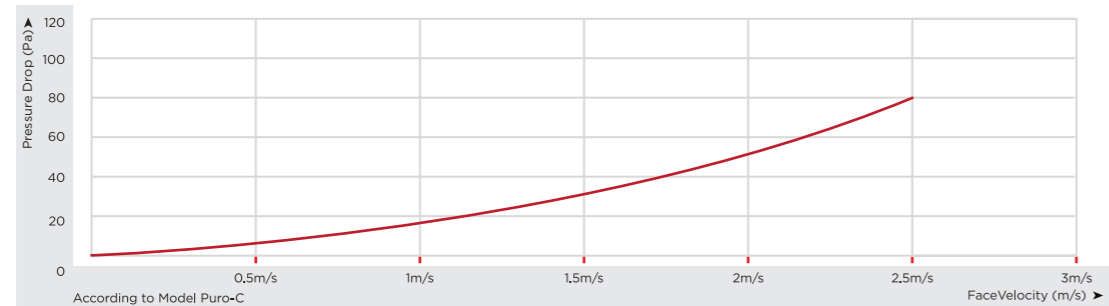
PRODUCT FEATURE

- Low initial resistance, no incremental pressure loss
- Reduce operating costs of HVAC systems
- Simple installation and removal steps
- Improve and enhance indoor air quality
- Low dust emission

APPLICATION

- PURO-C Series is a chemical filter designed to improve air quality. It has a wide range of applications and offers effective gaseous chemical filtration for different HVAC systems. In semiconductor applications, the PURO-C product is used in the supply air (MAU) and return air (RAU) of air conditioning units to control indoor gaseous molecular pollutants.
- Semiconductor - Backend Packaging and Testing Processes (Corrosion, Contamination, and AMC Control)

GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW



TECHNICAL SPECIFICATIONS

Model	PC-A2	PC-B2	PC-C1	PC-D2
Standard Nominal Dimension (W x L x H mm)	594x594x292	594x594x292	594x594x292	594x594x292
Air Flow (CMH)	3,400	3,400	3,400	3,400
Initial Pressure Drop (Pa)	<120@2.5m/s	<120@2.5m/s	<120@2.5m/s	<120@2.5m/s
Box Material	Galvanized steel/ Aluminum	Galvanized steel/ Aluminum	Galvanized steel/ Aluminum	Galvanized steel/ Aluminum
Media Area (m ²)	11.2	11.2	11.2	11.2
Face-Guard	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron	Aluminum (Anode material), Galvanized iron
Gasket Thickness (mm)	5	5	5	5
Targeted Gaseous	Acid airborne molecule (F,Cl,NO _x ,SO _x ,H ₂ S)	Alkaline airborne molecule (NH ₃)	Condensable Gases (VOC)	Dopant (Boron, Phosphorus)

Remark: 1. Pressure Drop Is Depending On The Type Of Adsorption Media.
2. Air Volume, Targeted Gaseous And Temperature May Affect The Removal Efficiency.
3. For customized sizes, please contact our sales representative for further information.

V-SHAPED PLEATED FILTER TYPE: PURO-V



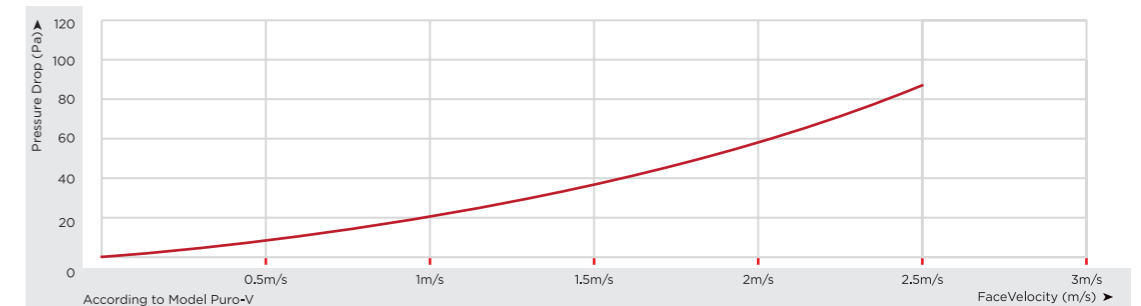
PRODUCT FEATURE

- Low initial resistance, no incremental pressure loss
- Reduces operating costs of HVAC systems
- Simple installation and removal steps
- Improves and enhances indoor air quality
- Disposable design
- Low dust emission

APPLICATION

- PURO-V Series is a chemical filter designed to improve air quality. It has a wide range of applications and offers effective gaseous chemical filtration for different HVAC systems. In semiconductor applications, the PURO-V product is used in the supply air (MAU) and return air (RAU) of air conditioning units to control indoor gaseous molecular pollutants.
- Semiconductor - Backend Packaging and Testing Processes (Corrosion, Contamination, and AMC Control)

GRAPH OF INITIAL PRESSURE DROP VERSUS AIRFLOW

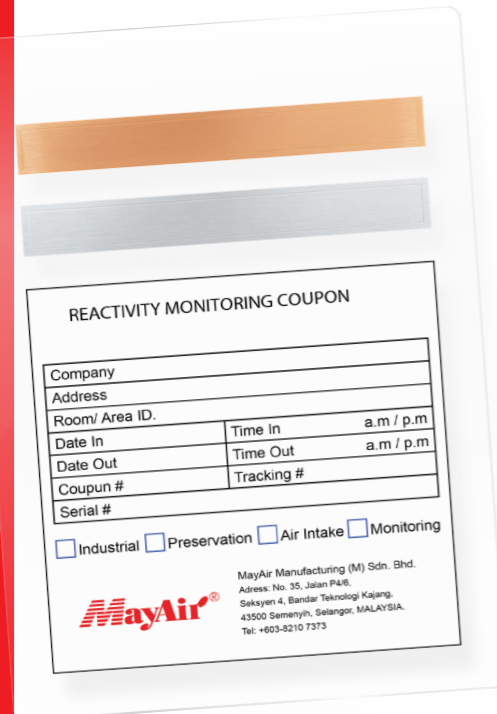


TECHNICAL SPECIFICATIONS

Model	PV-A2	PV-B2	PV-C1	PV-D2
Standard Nominal Dimension (W x L x H mm)	592x592x292	592x592x292	592x592x292	592x592x292
Air Flow at 2.5 m/s (CMH)	3,400	3,400	3,400	3,400
Initial Pressure Drop (Pa)	<90 at 2.5m/s	<90 at 2.5m/s	<90 at 2.5m/s	<90 at 2.5m/s
Frame	Plastic	Plastic	Plastic	Plastic
Gasket Thickness (mm)	5	5	5	5
Targeted Gaseous	Acid airborne molecule (F,Cl,NO _x ,SO _x ,H ₂ S)	Alkaline airborne molecule (NH ₃)	Condensable Gases (VOC)	Dopant (Boron, Phosphorus)

Remark: 1. Pressure Drop Is Depending On The Type Of Adsorption Media.
2. Air Volume, Targeted Gaseous And Temperature May Affect The Removal Efficiency.
3. For customized sizes, please contact our sales representative for further information.

ENVIRONMENTAL MONITORING TYPE: CORROSION COUPON



INTRODUCTION

Copper-silver corrosion test coupons placed indoors can provide insights into the potential impact of corrosive gases on computer performance after one month. These test coupons are a typical passive monitoring device exposed to the environment, with a monitoring period ranging from 30 to 90 days. The corrosion reports obtained from copper-silver corrosion test coupons represent the cumulative effect of various corrosion layers. This method assesses the "average" environmental conditions over a specific period and is also an indicator of the types and relative severity of corrosive gases.

TABLE: ISA CORROSION DEGREE

Level	Degree	Model
G1	Mild	The environment is sufficiently controlled that corrosion is not a factor affecting equipment reliability
G2	Moderate	The impact of corrosion in the environment can be measured and corrosion may be a factor affecting the reliability of equipment
G3	Harsh	The possibility of corrosion in the environment is very high. After further evaluation of the severity of the environment.
GX	Severe	Only specially designed equipment can survive in such an environment. The technical specification of this class of equipment is a point of discussion between the customer and the supplier .

TECHNICAL SPECIFICATIONS

Concentration Level	G1	G2	G3	G4
Copper coupon reaction rate (Å)	< 300	< 1,000	< 2,000	≥ 2,000
Silver coupon reaction rate (Å)	< 200	< 1,000	< 2,000	≥ 2,000
Common gas type	Common gas concentration (ppb)			
(H2S)	<3	<10	<50	≥50
(SO ²)	<10	<100	<300	≥300
(Cl ²)	<1	<2	<10	≥10
(NO ²)	<50	<125	<1,250	≥1,250
(HF)	<1	<2	<10	≥10
(NH ³)	<500	<1,000	<25,000	≥25,000
(O ³)	<2	<25	<100	≥100

REAL TIME CORROSION MONITORING TYPE: SURVEYOR PLUS™ M



INTRODUCTION

The SURVEYOR PLUS™ M is a multiparameter monitoring system designed for continuous environmental surveillance and early detection of conditions that could harm sensitive equipment. It helps prevent damage from high humidity, elevated temperatures, and corrosive environments by enabling timely corrective action.

The system measures humidity, temperature, and corrosion using two replaceable thin-film sensors, with Quartz Crystal Microbalance (QCM) sensors. A differential pressure measurement feature is also available as optional. Corrosion rates for copper and silver are shown on an LCD display, aligned with ISA environmental classifications (G1 to GX). Ideal for critical environments such as refineries, chemical plants, pulp and paper mills, control rooms, computer rooms, museums, and cleanrooms.

SYSTEM ADVANTAGES

DISPLAY

It is equipped with an LCD high-resolution display. Silver and copper corrosion, temperature, humidity and pressure (optional) are plotted at different time intervals. In addition, layer deposition thickness and cumulative and incremental corrosion following ISA standards are available for display.

SENSOR

The device utilizes silver and copper sensors operating at an oscillating frequency of 6,000,000 Hz to measure frequency deviations. The corrosion severity level is displayed on the main screen with range levels (G1-GX).

POWER SUPPLY

Supports a voltage input range of 7 to 40 VDC through a barrel jack connection port.

ALARM

Configurable alarms for each variable are available. These alarms have a HIGH and a LOW option available for the user to set. If one of the alarm limits is reached, then the device will display a blinking "!" symbol to notify the user.

OUTPUTS

The default communication output of the device is ModBUS protocol with RS485 connectivity port. Optionally, up to five analog outputs are available, one for each monitored variable. These outputs follow the 4-20mA standard for industrial environments. An SD Card securely stores all data points in a .CSV format, which can be easily removed for further data analysis. Additionally, an optional module can be added to enable Wi-Fi connectivity.

SPECIFICATION

No.	Parameters	Units	Range	Accuracy
A	Temperature	°C	-40 to 100	± 0.2
B	Relative Humidity	% RH	0 to 100	± 1.8
C	Copper Cumulative Corrosion	Å	0 to 4000	<1
D	Silver Cumulative Corrosion	Å	0 to 4000	<1
E	Differential Pressure (Optional)	Pa	± 600	± 0.25

ISA STANDARD GUIDELINE

Level	Degree	Model
G1	Mild	The environment is sufficiently controlled that corrosion is not a factor affecting equipment reliability
G2	Moderate	The impact of corrosion in the environment can be measured and corrosion may be a factor affecting the reliability of equipment
G3	Harsh	The possibility of corrosion in the environment is very high. After further evaluation of the severity of the environment
GX	Severe	Only specially designed equipment can survive in such an environment. The technical specification of this class of equipment is a point of discussion between the customer and the supplier

INDOOR RECIRCULATION UNIT

TYPE: IRU/IPU



INTRODUCTION

The MayAir Indoor Recirculation Unit (IRU) is designed to filter room air to maintain low corrosive gas levels in industrial environment, such as pulp and paper mills, petrochemical plants, refineries, steel mills and smelting plants as well as other process industries.

FEATURES

- Full charge of media
- Direct Drive Fan
- Variable Frequency Drive (Optional)
- Inlet and outlet grilles
- Vibration isolation for quiet operation
- 250 Pa external static
- Full particulate filtration
- Powder coated steel or SS304 construction
- Floor caster wheel
- Additional sound insulation for occupied spaces
- Gage units to read particulate filter pressure differentia

SYSTEM ADVANTAGES

PROVIDES CORROSIVE-FREE AIR

MayAir IRU supplies corrosion-free air to a controlled environment. The level of air cleanness meets or exceeds established industry standards, such as the Instrumentation, Systems and Automation Society's ANSI/ISA-71.04-2013. This level of protection conforms with the warranty requirements of most computer and instrument manufactures.

SELF CONTAINED RECIRCULATION SYSTEM

The IRU is a self-contained air purification system, designed to re-circulate and clean interior room air inside a protected space. The IRU system contains four stages of contamination control, and offer gage units to read filter particulate pressure differential.

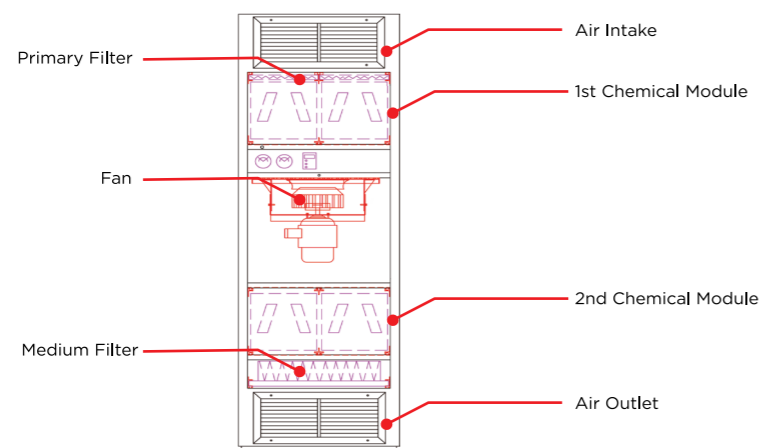
SYSTEM DESIGN FLEXIBILITY

The IRU system is available in four horizontal and four vertical configurations, ranging from 500 CFM to 2,000 CFM. The flexibility of the IRU system design allows for a solution to be tailored to meet particular air filtration needs and requirements

TARGETS SPECIFIC GASES

The IRU system is configured with two separate banks of media. This allows a user to choose different filtration medias for targeted contaminants gas removal.

STRUCTURE LAYOUT



Note: Unit airflow configuration is available with air inlet at the bottom and outlet at the top, or reversed (air inlet at the top and outlet at the bottom).

IRU DIMENSIONS

IRU Model	Dimensions		
	H	W	D
	mm	mm	mm
1,000V	2,050	818	662
2,000V	2,050	1,530	662

IPU DIMENSIONS

IPU Model	Dimensions		
	H	W	D
	mm	mm	mm
500 V	2,300	750	720
1,000 V	2,300	1,450	720

Note: The provided specification is for estimation purposes only. Actual dimensions and details will be customized on a case-by-case basis.

DEEP BED SCRUBBER TYPE: DBS



INTRODUCTION

The MayAir Deep Bed Scrubber (DBS) is designed for areas where high contaminant gas levels are present. The DBS is ideal for refineries, steel mills, smelters, chemical plants, petrochemical plants, and other hostile environments.

FEATURES

- GI with epoxy coated or optionally SS304
- Pre-filter and Final filters (30% efficient per ASHRAE standard 52-76)
- Up to three different dry-scrubbing medias
- Duty or optionally with standby motor and blower
- 250 Pa external static

SYSTEM ADVANTAGES

CORROSION-FREE AIR

Each DBS delivers "G1" corrosion-free air to the space it is protecting. The scrubber's aluminum corrosion is corrosion resistant and capable of withstanding outdoor conditions. The DBS is designed for installation outside of the space it is protecting, making it suitable for retrofit applications or in environments without room for air purification equipment within the space to be protected. System are available from 800 CFM and higher, offering design flexibility to meet specific design requirements.

SYSTEM COMPATIBILITY

The DBS is designed to be compatible with Circul-Aire IRU and IPU when room requirements include environmental recirculation.

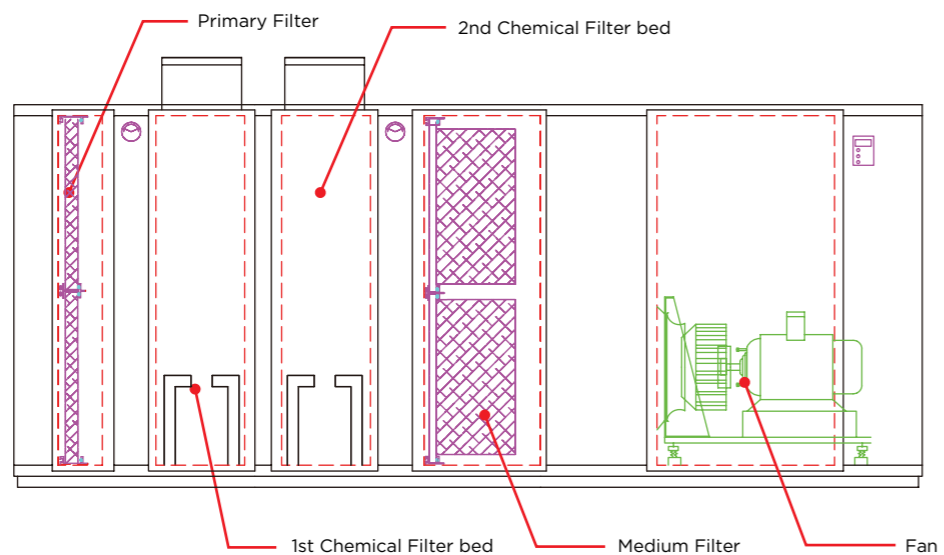
MEDIA SELECTION

To control specific contaminants gases, the DBS is filled with up to three different dry scrubbing media. Each media type effectively removes a range of contaminant gases for maximum protection against corrosion.

ECONOMICAL

The DBS is effective at a low cost per CFM. Specific pressurization and efficiency requirements can be met, reducing the capital cost of the equipment.

STRUCTURE LAYOUT



DIMENSIONS - 2 PASS SYSTEM

DBS Model	Dimensions			Unit Weight (Without Media)
	Length	Height	Width	
	mm	mm	mm	
402	2,514	1,206	601	181
403	2,514	1,206	902	238
404	2,514	1,206	1,203	283
504	2,514	1,507	1,203	344
604	2,514	1,808	1,203	385
605	2,514	1,808	1,504	464
606	2,514	1,808	1,804	521
706	2,514	2,120	1,804	601
608	2,514	2,120	2,406	657

Note: The provided specification is for estimation purposes only. Actual dimensions and details will be customized on a case-by-case basis.

SIDE ACCESS HOUSING TYPE: SAH



INTRODUCTION

The MayAir Side Access Housing (SAH) is designed to remove both particulate and gaseous pollutants for general odor and corrosion control in commercial and industrial environments.

FEATURES

- GI with powder epoxy coated / SS304
- Custom prefilter and/or final filter section
- Rounded edges, precision-cut panels and recessed doors
- Monolithic panels for added structural strength
- PU insulation for excellent thermal insulation

SYSTEM ADVANTAGES

CORROSION-FREE AIR

The flexibility of the MayAir SAH permits customized designs for specific installation requirements. A full range of size options, pre-filter selections and particulate final filter alternatives are available for customization of your system.

EASY MAINTENANCE

MayAir SAH are tracked to house disposable modules, which are factory filled with your choice of media. When the media inside the module is spent, the old module is simply replaced with a new one; no tools are required.

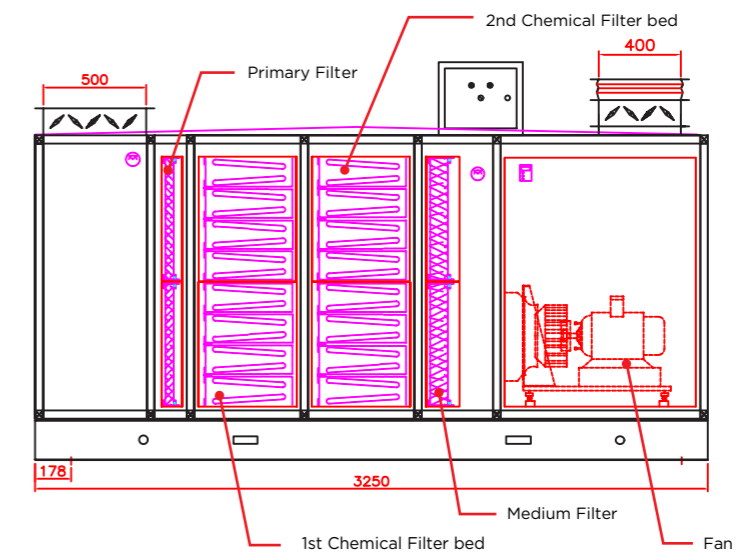
RETROFIT APPLICATIONS

MayAir SAH accommodate virtually any airflow, offer a wide selection of filter options, and are not limited by size. Flexible system designs enable you to tailor your system according to the needs of your budget, space and air handling system.

MEDIA SELECTION

You may customize your selection of engineered media according to the contaminants present in your unique environment.

STRUCTURE LAYOUT (MM-18)

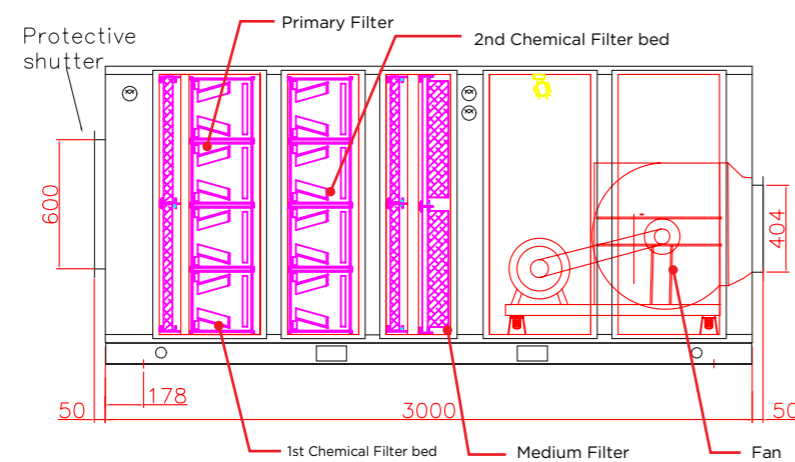


DIMENSIONS

SAH Model	Dimensions				Air Volume	
	Length (mm)		Height	Width	CMH	
	MM18	MM12	mm	mm	MM18	MM12
202	1,619	1,333	605	602	3,400	1,700
402	1,619	1,333	1,207	602	6,800	3,400
404	1,619	1,333	1,207	1,203	13,600	6,800
604	1,619	1,333	1,808	1,203	20,400	10,200
606	1,619	1,333	1,808	1,805	30,600	15,300
608	1,619	1,333	1,808	2,407	40,800	20,400
610	1,619	1,333	1,808	3,008	51,000	25,500
804	1,619	1,333	2,410	1,203	27,200	13,600
808	1,619	1,333	2,410	1,805	51,000	25,500
810	1,619	1,333	2,410	3,008	68,000	34,000

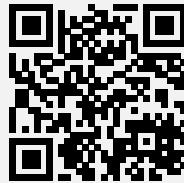
Remark: 1. The standard SAH come with first stage 2in Pre-filter, second and third stage module 12 or 18 and final stage 4in Medium filter.
2. The provided specification is for estimation purposes only. Actual dimensions and details will be customized on a case-by-case basis.

STRUCTURE LAYOUT (MM-12)





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