THE WORLD LEADER IN CLEAN AIR SOLUTIONS

SAAF™ Cassette Cleanroom Grade

1-INCH V-BANK, 12-INCH DEEP GAS FILTRATION

- One-piece construction reduces bypass
- Form and fit unlike any other 12″-deep, 1″ gas filtration cassette
- Improved fit and sealing, even when deployed in older cassette holding systems
- Enhanced media utilization design
- No-glue design eliminates problems from spills, off-gassing, bypass, and leakages
- Patented cassette design and manufacturing process. Patents covered under US 7,588,629 B2.
- Filled cassettes UL Classified

AAF's SAAF Cassette Cleanroom Grade is the best 1″ V-bank, 12″-deep gas filtration cassette in the industry.

High Tech Features

The SAAF Cassette Cleanroom Grade is constructed from High Impact Polystyrene (HIPS) and comes prefilled with SAAF chemical media. High technology design tools were employed to validate the design and confirm better performance. Computational Fluid Dynamics (CFD) modeling and performance tests confirm optimal 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. The design retrofits easily and performs better than older legacy cassettes in existing installations.

Efficiency and Performance

Most legacy cassette manufacturers state that their cassettes operate at >90% removal efficiencies. In reality, these efficiencies are not cassette efficiencies. In an installation, removal efficiency is dependent on the precise sealing of the chemical media delivery mechanism, i.e. the cassette with the cassette holding mechanism. Due to looser manufacturing tolerances, testing of most legacy cassettes shows removal efficiencies as low as 65%.

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SAAF™ Cassette Cleanroom Grade

Design, Construction, and Patents

SAAF Cassettes perform and operate at the optimum gas filtration efficiency due to various patent pending features.

SAAF-T-Butterfly Seal and SAAF-T-Groove – Designs provide near absolute sealing, even in existing retrofit applications.

SAAF-V – Patented enhanced media utilization design eliminates the "nose cavity" typically created by legacy cassettes. Nose cavities "cocoon" up to 30% of the chemical media, keeping it isolated from airflow contact at all times during the life of the cassette. SAAF Cassettes are the only cassettes which utilize 92% of all chemical media in the cassette – outperforming legacy cassettes by 25%.

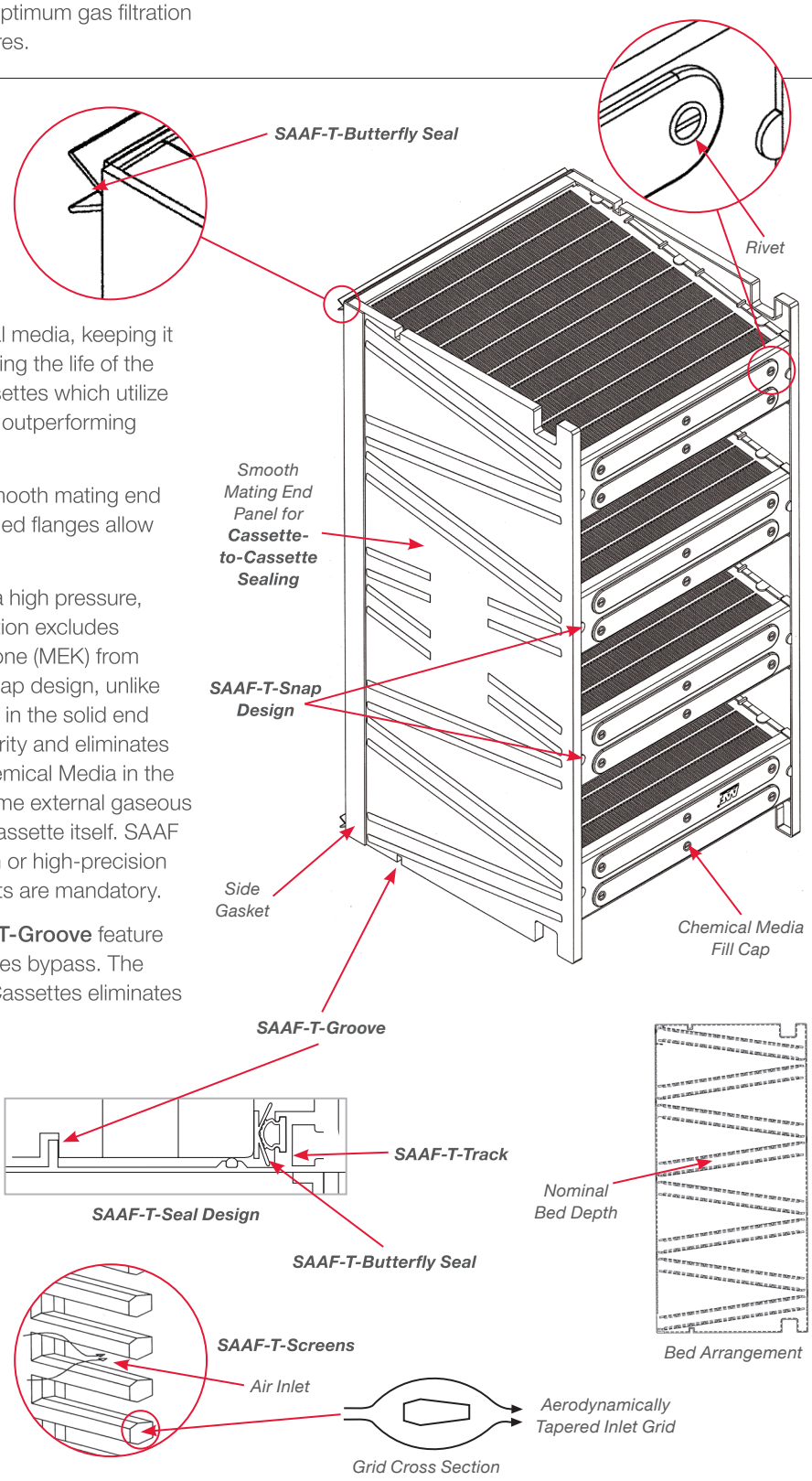
Cassette-To-Cassette Mating Seals – Smooth mating end panels with no penetrations or outward turned flanges allow excellent cassette-to-cassette sealing.

SAAF-T-Snap – Patented design provides a high pressure, no-glue snap assembly. This rigid construction excludes harmful glues, solvents, or Methyl Ethyl Ketone (MEK) from the manufacturing process. The SAAF-T-Snap design, unlike legacy cassettes, has no see-through holes in the solid end plates. This allows for better structural integrity and eliminates gas bypass problems. The entire SAAF Chemical Media in the cassette can be used specifically to overcome external gaseous contaminants, not contaminants from the cassette itself. SAAF Cassettes are the ideal choice in cleanroom or high-precision applications where zero off-gassing products are mandatory.

SAAF-T-Track – System utilizes the **SAAF-T-Groove** feature and provides a compression fit that eliminates bypass. The solid top and bottom rail system on SAAF Cassettes eliminates yet another bypass zone.

SAAF-T-Seal – Patented plastic rivets secure the solid fill caps at multiple points and secure against bursts or leaks in normal usage. Older legacy cassettes use stickers, labels, or low friction end caps that have high instances of failure and chemical media spillage.

SAAF-T-Screens – Patented and precision engineering allow optimized apertures for better media retention and better energy efficiency through improved aerodynamics and reduced pressure drop.



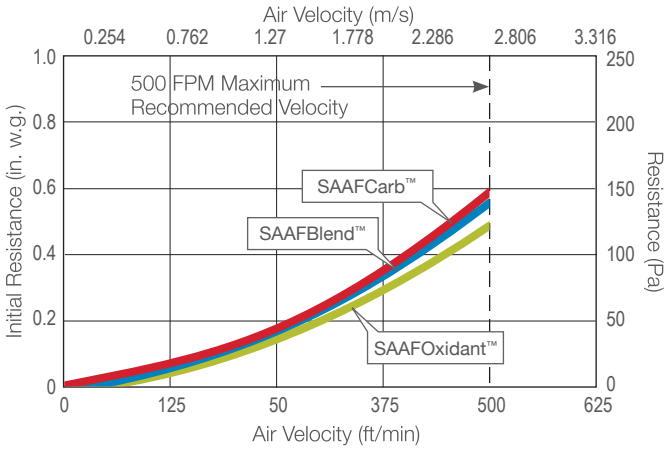
Applications

SAAF Cassette Cleanroom Grade provides a compact cassette solution for:

- Odor control at commercial buildings with limited available space
- Outdoor air purification for cleanroom or pharmaceutical applications
- Irritant removal in institutional or commercial establishments
- Contaminant control in museums, archives, or historical facilities

Performance Data

Initial Resistance vs. Airflow Capacity



Application Parameters

Humidity Range*
5% – 99% RH

Temperature*
-4˚F to 125˚F

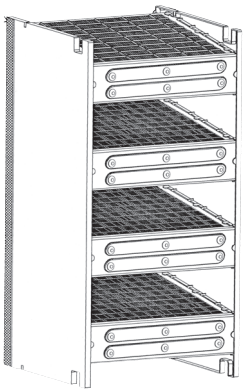
**Consult AAF sales representative for media/module combinations.*

Disposal and Recycle Instructions

1 Remove the cassette after use.

2 Empty out the SAAF chemical media by removing the SAAF-T-Seal screws.

3 Depending on the SAAF chemical media in use, the media may be sent to a regular landfill or disposed of according to applicable local, state, and federal regulations.



4 The empty cassette can then be sent for plastic recycling or for incineration.

5 The empty cassette is completely incinerable and recyclable.

Note: Check with local regulations on sending plastic to a recycling area if it has come in contact with hazardous or toxic materials.

SAAF™ Cassette Cleanroom Grade

SAAF™ Gas-Phase Cassette Specifications

General Information

1. The SAAF Gas-Phase Cassettes are a key component of the Side Access Housings (SAH), Pressurization and Recirculation Units (PRU), Recirculation Units (RU), and Front Access Housings (FAH). AAF's SAAFSeal design causes a positive seal between the cassettes and the above mentioned equipment to eliminate bypass and provide the highest possible efficiency.

Design and Materials

1. The cassette should be formed completely from injection molded, recyclable (or incinerable) HIPS.
2. NO GLUES or SOLVENTS should be used in the manufacture of the cassette to prevent offgassing of VOCs. The plastic components that form the cassette should be connected together using internal high pressure, snap-lock connectors formed into the connecting components.
3. Chemical media should be supported between aerodynamically tapered screens with very low drag coefficient (for ENERGY EFFICIENCY).
4. NO NOSE CAVITIES are allowed in cassettes. The inlet and outlet screens should be parallel, and the inlet and outlet face areas should be equal to ensure equal and complete utilization of the chemical media. The screen openings should have a maximum width of 2 mm to ensure full retention of the chemical media and to eliminate downstream fouling.
5. The side plates of the cassette should be completely flat and planar and without protrusions to ensure that adjacent cassettes mate accurately. All flanges should be internal. No external flanges should be used.
6. A 25 mm wide gasket should be mounted on each side plate to seal between adjacent cassettes.
7. A V-shaped Butterfly® Gasket should be located along each edge of the air entering, or sealing, face of the cassette. When the cassette is installed into the track, the wings of the Butterfly® gasket should engage and envelope the tubular gasket that is installed in the extruded aluminum track, providing a complete seal.
8. The cassette should include a precision molded slot positioned to accept a guide located on the surface of the support track. The slot and guide combination will ensure that the cassette is accurately positioned in the mounting track, ensuring full contact and proper compression of the track mounted gasket.
9. The chemical media cassette should be as indicated below, as manufactured by AAF.
10. UL Classified in accordance with UL Standard 900 and ULC-S111.
11. Contains chemical media, various (as stated in submittal or as approved).

General Specifications and Application Parameters

Nominal Size
24″ (h) x 12″ (w) x 12″ (deep)

Airflow
Designed for 500 FPM (2.5 m/s) face velocity or
500 CFM (850 m^3/h) airflow per cassette

Pressure Drop
SAAF Oxidant™ media – 4 mm = 0.47 in. wg.
SAAF Carb media – 4 mm pellet = 0.56 in. wg.
SAAF Blend GP media – 0.57 in. wg.

Construction
100% recyclable/incinerable HIPS plastic

UL Rating
UL Classified in accordance with UL Standard 900 and ULC-S111*

Chemical Filter Bed Depth
1″ V-bank arrangement

Chemical Media Capacity
0.7 cubic feet (0.014 m^3)

Contains Chemical Media
Various (as stated in submittal or as approved)

Chemical Media Utilization Index
92% or higher

Nominal Residence Time
0.04 sec

**Consult AAF sales representative for media/module combinations.*

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