#### THE WORLD LEADER IN CLEAN AIR SOLUTIONS

# Alpha Cell®

### STANDARD CAPACITY HEPA FILTERS

- Minimum efficiency of 99.97%
- Individually tested for certified performance
- Designed to meet the demanding airflow and efficiency requirements of critical applications

### **Designed for Critical Applications**

AAF Flanders offers a complete line of Alpha Cell HEPA filters in various efficiencies to meet the needs of critical applications where HEPA filtration is required. Individual testing, rigid quality control, and modern assembly methods are used to ensure conformance to specifications. Alpha Cell HEPA and ULPA filters are UL 900 Classified.

#### **Individually Tested and Certified**

AAF Flanders individually tests and certifies each Alpha Cell HEPA filter to meet the customer's requirements for resistance and efficiency (penetration) at the filter's nominal rated capacity. This information appears on a test label affixed to the filter. When used with correctly selected and installed mounting frames or housings, AAF Flanders Alpha Cell HEPA filters will easily pass an in-place validation test to determine the overall system efficiency.

#### **Standard HEPA Filters**

Each Alpha Cell HEPA Filter has a minimum efficiency of 99.97% on 0.30 micrometer size particles when tested at rated capacity on a Q-107 Penetrometer. Filters rated for 1000 CFM or less are challenged with an approved nearly monodispersed oil aerosol of 0.30 micrometer size. Filters rated for flows greater than 1000 CFM are tested using a polydispersed oil aerosol. By measuring the upstream and downstream concentration of these particles with a light scattering photometer, the penetration can be determined and the efficiency can be calculated.

#### **Scan Tested HEPA Filters**

Each scan tested Alpha Cell HEPA filter has a minimum efficiency of 99.99% on 0.30 micrometer particles. Scan testing is in accordance with Section 6.2 of IEST-RP-CC034.1, HEPA and ULPA Filter Leak Tests. In the scan test, the filter is challenged with a high concentration of an approved oil aerosol or Polystyrene Latex Spheres (PSL). The media pack and pack-to-frame seal is scanned using a photometer or particle counter to ensure that there are no leaks greater than .01% of the upstream concentration at 100 FPM face velocity.

#### **ULPA Filters**

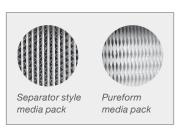
AAF Flanders can provide Pureform® and Separator Style ULPA Filters with efficiencies up to 99.9995% on 0.12 micrometer size particles.



## Alpha Cell® Filters

#### Separator or Separatorless

AAF Flanders manufactures both conventional separator style and Pureform® separatorless HEPA filters. The media of a separator style filter is folded over corrugated aluminum



separators with hemmed edges to separate the pleats in the filter pack. AAF Flanders manufactures its own filter media, enabling a unique manufacturing process for the production of Pureform separatorless HEPA filters.

The Pureform filter offers many advantages over conventional separator style HEPA filters:

- More usable media area for longer service life because of higher dust holding capacity
- Reduced cost of ownership because of longer service life
- · Maximum utilization of the media
- Can handle harsh environments that can damage aluminum separators
- Media pack can be incinerated
- Pureform media is 28 mil thick, which is significantly thicker than conventional 15 mil media used in separator style **HEPA** filters

Frame Materials: Alpha Cell filters are available in a variety of wood and metal frame materials, such as particle board, plywood, galvanized steel, stainless steel, and aluminum.

Gasket and Fluid Seal: The standard gasket seal is 34" x 14" neoprene for installation on either the upstream, downstream, or both sides of the filter. The standard fluid seal is AAF Flanders BluJel® Seal, which is a two-part silicone material suitable for temperatures up to 390°F.

Faceguards (Optional): Faceguards are used to protect the filter media from mechanical damage. The typical faceguard material is expanded aluminized steel. Galvanized 4 x 4 mesh welded wire and Type 304 stainless steel facequards are also available.

UL Classification: Alpha Cell filters are UL 900 Classified.

Holding Frames and Housings: Alpha frames are designed for Alpha Cell filters in built-up filter banks. Each filter is secured in the frame with four bolt-type fasteners that either compress the gasket or press the knife edge into the gel in the filter channel to maintain a leak-tight seal.

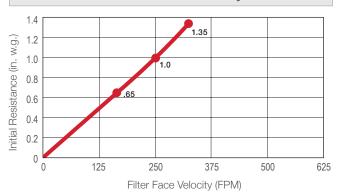
Surelock B and C HEPA filter housings are recommended for side access applications. The filters are sealed in place with either spring-loaded swing arm assemblies or a locking mechanism. The swing arm assemblies or locking mechanism either compress the gasket or press the knife edge into the gel in the filter channel to maintain a leak-tight seal.

#### **Product Information**

Filter Size and Frame Depth	Actual Size (inches)	CFM Capacity at Clean Pressure Drop, Inches w.g.			Weight
Designator	(H x W x D)	.65	1.0	1.35	(lbs.)
GG-F	24 x 24 x 11½	650	1000	1300	38
GC-F	24 x 12 x 11½	300	455	590	26
YY-F	23% x 23% x 11½	615	945	1235	37
YU-F	23% x 11% x 11½	275	425	550	25
GN-F	24 x 30 x 11½	830	1275	1655	45
CC-F	12 x 12 x 11½	135	205	265	14
GG-D	24 x 24 x 5%	325	500	650	20
GC-D	24 x 12 x 5%	145	225	295	12
BB-D	8 x 8 x 5%	25	35	45	6
CC-D	12 x 12 x 5%	70	105	135	9
YY-D	23% x 23% x 5%	305	470	610	18
YU-D	23% x 11% x 5%	270	215	540	23
GN-D	24 x 30 x 5%	410	635	825	26
GP-D	24 x 36 x 5%	505	775	1010	33
GQ-D	24 x 48 x 5%	680	1045	1360	39
GR-D	24 x 60 x 5%	860	1320	1715	32
GS-D	24 x 72 x 5%	1035	1590	2065	46
NN-D	30 x 30 x 5%	525	810	1055	26
NP-D	30 x 36 x 5%	640	985	1280	30
NQ-D	30 x 48 x 5%	865	1330	1730	37
NR-D	30 x 60 x 5%	1090	1680	2185	44
NS-D	30 x 72 x 5%	1315	2025	2630	52
PP-D	36 x 36 x 5%	790	1215	1580	33
PQ-D	36 x 48 x 5%	1050	1620	2105	41
PR-D	36 x 60 x 5%	1315	2025	2630	49
PS-D	36 x 72 x 5%	1580	2430	3160	59

#### **Performance Data**

#### Initial Resistance vs. Filter Face Velocity



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