Flanders®
FOREMOST IN AIR FILTRATION

# COMMERCIAL REPLACEMENT AIR FILTER CATALOG

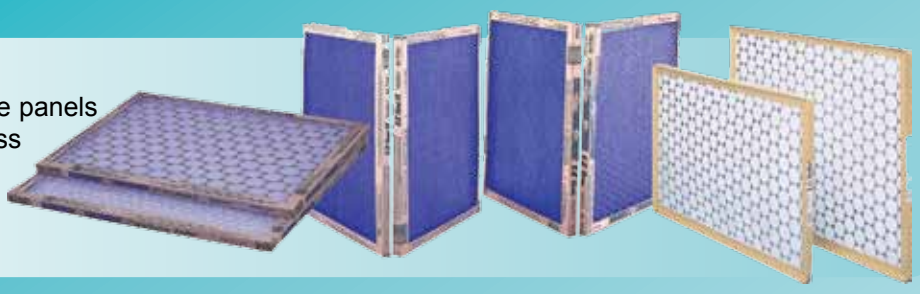
**Disposable Panel Filters**
**Ring Panels, Sleeves & Cubes**
**Media & Auto Rolls**
**Pleated Air Filters**
**Rigid Filters**
**Extended Surface Filters**
**Metal Washable Filters**
**Frames & Framing Systems**
**95 DOP & HEPA Filters**
**Odor Control Filters**
**Residential Air Cleaners**

Flanders

# Commercial Replacement Air Filter Catalog Overview

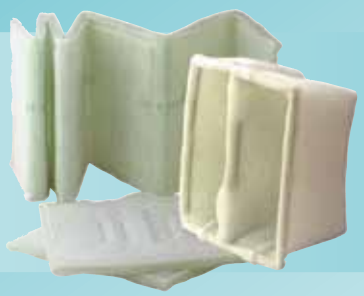
## Disposable Air Filters

The widest selection of disposable panels you will find anywhere. Spun glass and synthetic media...all standard sizes and almost any "special" size.



## Polyester Ring Panels, Links, Sleeves

High grade polyester synthetic fiber media in a variety of styles, heat sealed onto heavy wire frames.

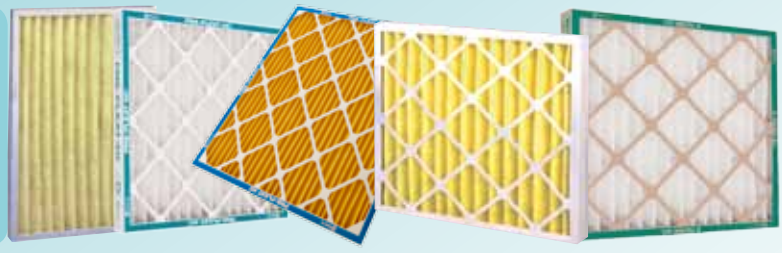


## Air Filter Media & Auto Rolls

Cut-to-fit hammock and service roll media in a variety of styles, plus bulk rolls of spun glass and synthetic media. Auto rolls in the media style of your choice, wound on the core style of your choice. Hundreds of models.

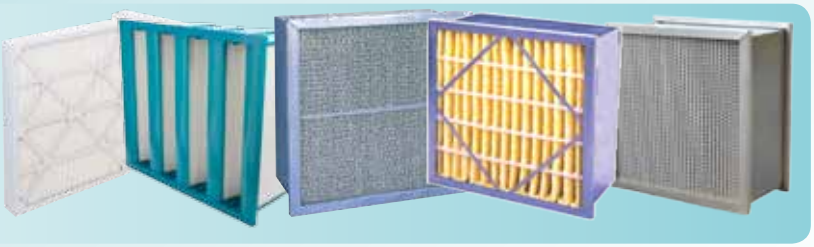
## Pleated Air Filters

One of the largest inventories of pleated panel filters you will find anywhere. Five styles from MERV 8 to MERV 13 are offered in just about any size you will ever need.



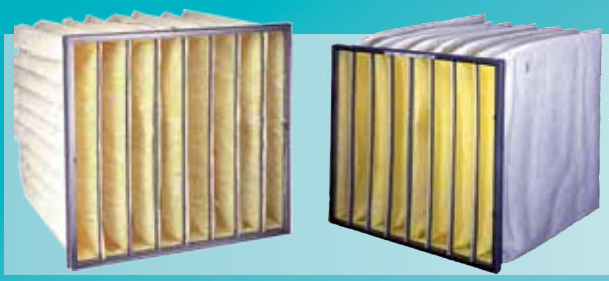
## Medium & High Efficiency Rigid Type Air Filters

A wide variety of styles, sizes and efficiencies from 4" mini pleat to low pressure header type.



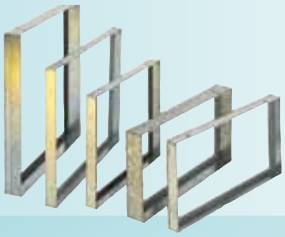
Flanders

# Commercial Replacement Air Filter Catalog Overview



## Medium & High Efficiency Extended Surface Type Filters

Huge line of “bag” filters in all of the most popular sizes and efficiencies.



## Holding Frames

Ruggedly built holding frames for a variety of prefiltration and secondary filtration needs. Factory-cut K-Track modular framing systems replace field erected holding frames. Flanders PF-1 Holding Frames are used to construct built-up filter banks for upstream or downstream access using ASHRAE rated filters. Flanders Alpha A-4 Frames are permanent holding frames for field or OEM assembly of built-up HEPA/ULPA filter banks

## HEPA/ULPA Filters

For genuine HEPA grade filtration with minimum efficiency of 99.97% on 0.30 micrometer size particles. Several types, including high capacity, high temp, high velocity, minipleat panels.

## Gas Phase and Odor Control

Ranging from pleated type , granular carbon, bonded HMZD type to total detention rechargeable systems.

Flanders®
FOREMOST IN AIR FILTRATION

# Table of Contents

Flanders®
FOREMOST IN AIR FILTRATION

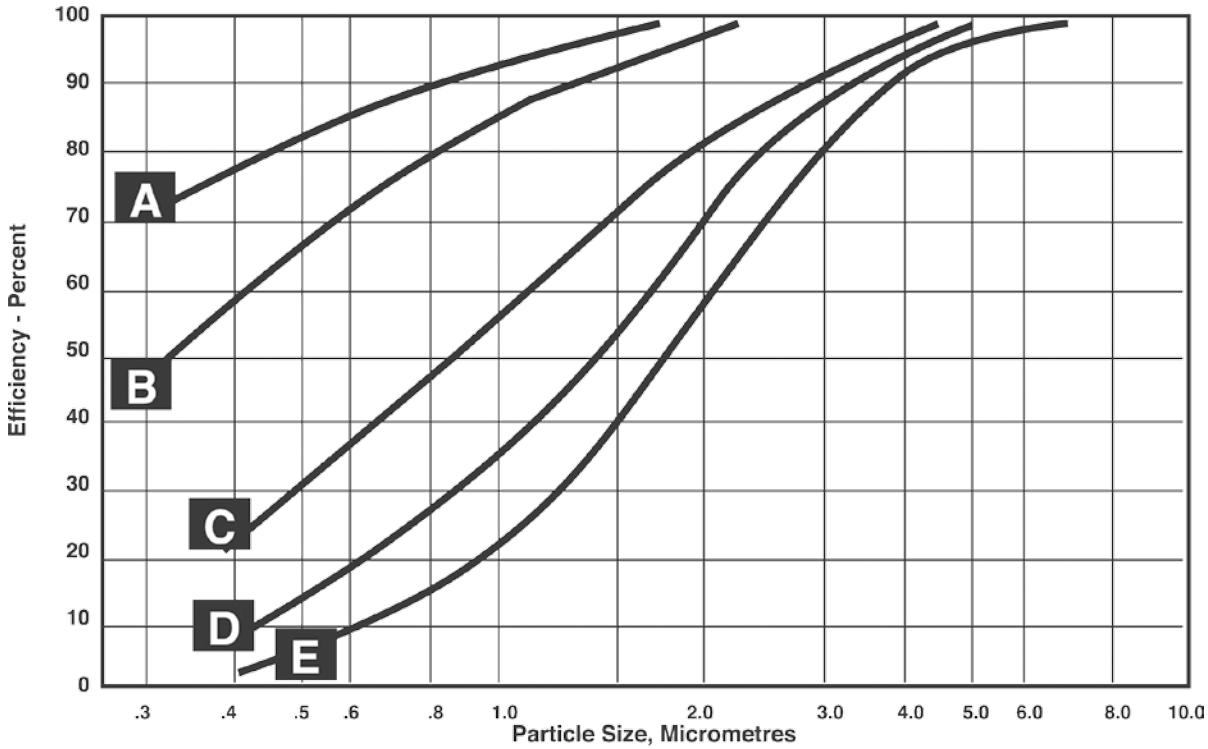
# Table of Contents

# Filter Efficiency

## *Cross Reference of Various Filter Efficiencies*

***Bulletin PB2101-0512***

### Approximate Efficiency vs. Particle Size for Typical Air Filters




| | | |
|---|---|---|
| **A** | 90-95% | Efficiency, MERV 14 Super-Flow V, Rigid Air, PrecisionCell, PrecisionCell II, PrecisionPak |
| **B** | 80-85% | Efficiency, MERV 13 Super-Flow V, Rigid Air, PrecisionCell, PrecisionCell II, PrecisionPak, Pre Pleat M13 |
| **C** | 60-65% | Efficiency, MERV 11 Super-Flow V, Rigid Air, PrecisionCell, PrecisionCell II, PrecisionPak, 62RM11 |
| **D** | 50-55% | Efficiency, MERV 10 Precision Pak |
| | 40-45% | Efficiency, MERV 9 Rigid Air |
| | 30% | Efficiency, MERV 8 Pre Pleat 40 LPD, VP-MERV 8 |
| **E** | 25-30% | Efficiency, MERV 7 Cube Filters, Pre Pleat 40 Economy |

Compiled and averaged from manufacturer's data. Efficiency per ASHRAE Standards 52.2 Test methods. Curves are approximations only for general guidance. Values from them must not be used to specify air filters, since a generally recognized test standard does not exist. Graphs from Equipment Handbook, Air Cleaners for Particulate Contaminants. Reprinted by permission of the American Society of Heating, Refrigerating and Air Conditioning engineers from the 1988 ASHRAE Handbook - Equipment.

# Filter Efficiency Guide

| (1) Arrestance | (1) Efficiency | (2) MERV | (3) European Efficiency Class | Filter Type | Flanders Corporation Product Selection |
|---|---|---|---|---|---|
| 60-80% | Less Than 20% | MERV 1-4 | G1, G2 | Disposable Panel Filter | EZ Flow, EZ Flow II, HD Industrial Grade, Modified Channel Frame, Pinch Frame, Kwik Kut, Hammock, Permaire Service Rolls, Pads |
| 80-90% | Less Than 20% | MERV 5 | G3 | Disposable Panel Filters | HD Industrial Grade, Modified Channel Frame |
| | | | | Ring Panel Filters | Filters Series ST55, Series 225T, Series 325T, Series 425T |
| | | | | Synthetic Media | 5DT,1DT, 2DT, Pre-T Model, Scrimback PSF PSF55, PSF225, PSF325, PSF425 |
| | | | | Automatic Roll Filter Media | Scrim-back Glass, Skin-back Glass, Economy Glass, Polyester /Treated Poly Media |
| 90-95% | 20-30% | MERV 6 | G4 | Cube Filters | Series ST55, Series 225T Series 325T, Series 425T |
| 95-98% | 25-40% | MERV 7-8 | G4 | Pleated Panel Filters | Economy Pleat, Pre Pleat 40 LPD, VP-MERV 8 |
| 99% | 50-60% | MERV 9-10 | F5 | Pleated Panel Filters | Pre Pleat 40 CL 1, Pre Pleat 40 HT |
| | | | | Extended Surface Pocket Filters | PrecisionPak, PrecisionPak XDH |
| | | | | Extended Surface Rigid Cell Filters | Rigid Air |
| 99% | 60-70% | MERV 10-11 | F6 | Pleated Panel Filters | Pre Pleat 62RM11 |
| | | | | Extended Surface Pocket Filters | PrecisionPak, PrecisionPak XDH |
| | | | | Extended Surface Rigid Cell Filters | Rigid Air, Super-Flow Q, Super-Flow V, PrecisionCell, PrecisionCell II, PrecisionCell M, PrecisionCell MSH, PrecisionCell M16, PrecisionCell HT, PrecisionCell GT |
| 99% | 70-80% | MERV 12-13 | F6 | Extended Surface Pocket Filters | PrecisionPak, PrecisionPak XDH |
| 99% | 80-85% | MERV 13 | F7 | Pleated Panel Filters | Pre Pleat M13 |
| 99% | 80-90% | MERV 13-14 | F7 | Extended Surface Pocket Filters | PrecisionPak, PrecisionPak XDH |
| | | | | Extended Surface Rigid Cell Filters | Rigid Air, Super-Flow Q, Super-Flow V, PrecisionCell, PrecisionCell II, PrecisionCell M, PrecisionCell MSH, PrecisionCell M16, PrecisionCell HT, PrecisionCell GT |
| 99% | 90-95% | MERV 14-15 | F8 | Extended Surface Pocket Filters | PrecisionPak, PrecisionPak XDH |
| | | | | Extended Surface Rigid Cell Filters | Rigid Air, Super-Flow Q, Super-Flow V, PrecisionCell, PrecisionCell II, PrecisionCell M, PrecisionCell MSH, PrecisionCell M16, PrecisionCell HT, PrecisionCell GT |
| N/A | 95% DOP | MERV 16 | H11 | Extended Surface Rigid Cell Filters | Alpha 95, PrecisionCell M16 |
| N/A | 99.97%<br>99.99% | N/A | U13-14<br>U15 | HEPA/ULPA Filters | Alpha-Cell E, Alpha Cell, Alpha 2000, Alpha HT, Super-Flow 24, Alpha Cell, Alpha 2000, Alpha HT, TH Series |
| | 99.999% | | | | Alpha-Cell, Alpha 2000, Alpha HT, TH Series, Dimple Pleat |
| | 99.9995% | | | | Alpha Cell, Alpha 2000, Alpha HT, TH Series, Dimple Pleat |
| | 99.99999% | | | | TH Series, Dimple Pleat |

(1) Arrestance and Dust Spot Efficiency ratings are based on the ASHRAE 52.1 - 1992 test method.
(2) Minimum Efficiency Reporting Value (MERV) ratings are based on the ASHRAE 52.2 test method.
(3) European Efficiency Classes are based on European Standards EN 779 and EN 1882.

Flanders®
FOREMOST IN AIR FILTRATION



PB-3001-0212

| "ITEM# PREFIX" | DESCRIPTION | ITEM # & SIZING INFORMATION |
|---|---|---|
| **10055** | EZ FLOW II | MIN. SIZE 5"X5" / MAX. SIZE 27"X36"<br>DOUBLE SIZES OF EZ FLOW II N/A USE<br>10255 SERIES FOR FILTERS OVER 36" |
| **10155** | EZ FLOW | MIN. SIZE 5"X5" / MAX. SIZE 27"X36"<br>DOUBLES SIZE ARE N/A USE 10255<br>SERIES FOR FILTERS OVER 36" |
| **10255** | FLAT PANEL HD | MIN. SIZE 5”X5” / MAX. SIZE 27”X36” |
| **10255D**<br>**Double** | FLAT PANEL HD<br>DOUBLE FILTERS OVER 36” | MIN. SIZE 4”x36-1/8”/MAX SIZE 27”x72” OR 36”x54” |
| **10355** | FLAT PANEL GRILLE | NOTE GRILLE FILTERS ALWAYS GO BY THE LARGE SIZE FIRST |
| **11255** | FLAT PANEL HD PSF | MIN. SIZE 5”X5” / MAX. SIZE 27”X36” |
| **11255D**<br>**Double** | FLAT PANEL HD PSF<br>DOUBLE FILTERS OVER 36” | MIN. SIZE 4”x36-1/8”/MAX. SIZE 27”x72” OR 36”x54” |
| **11256** | MODIFIED PINCH W/NOTCH PSF | MIN.SIZE 5”X5” / MAX. SIZE 27”X36” |
| **11256D**<br>**Double** | MODIFIED PINCH W/NOTCH PSF<br>DOUBLE FILTERS OVER 36” | MIN. SIZE 4”x36-1/8”/MAX. SIZE 27”x72” OR 36”x54” |
| **40055** | MEDIA PAD GLS | |
| **40155** | MEDIA PAD PSF 1DT | |
| **50055** | WASHABLE KKM | MAX. SIZE 27”X48” |
| **50855** | ELECTROSTATIC N'AIRE | |
| **51255** | ALUM WASH KKM | MAX. SIZE 24”X48 |
| **60055** | UNI-FRAMES W/O BARS | |
| **60355** | UNI-FRAME W/ BARS - DOUBLES NOT AVAILABLE | MIN. SIZE 6"X6" / MAX. SIZE 27"X36" |
| **85855** | PRE PLEAT CLASS 1 - STANDARD CAPACITY | CUSTOM SIZES NOT AVAILABLE |
| **85955** | PRE PLEAT CLASS 1 - HIGH CAPACITY | CUSTOM SIZES NOT AVAILABLE |
| **84555** | PRE PLEAT HIGH TEMP - STANDARD CAPACITY | CUSTOM SIZES NOT AVAILABLE |
| **84655** | PRE PLEAT HIGH TEMP - HIGH CAPACITY | CUSTOM SIZES NOT AVAILABLE |
| **84355** | PRE PLEAT 40 LPD - ECONOMY - MERV 7 | MIN. SIZE 6”X6” MAX SIZE 25”X30” |
| **84355D**<br>**Double** | PRE PLEAT 40 LPD - ECONOMY - MERV 7<br>DOUBLE FILTERS OVER 30” | MIN. SIZE 25”X30” / MAX. SIZE 25”X60” OR 30”X50” |
| **80055** | PRE PLEAT 40 LPD - STANDARD CAPACITY - MERV 8 | MIN. SIZE 6”X6” / MAX SIZE 25”X30” |
| **80085** | VP-MERV 8 - STANDARD CAPACITY - MERV 8 | MIN. SIZE 6”X6” / MAX SIZE 25”X30” |
| **80285** | VP-MERV 8 - HIGH CAPACITY - MERV 8 | MIN. SIZE 6”X6” / MAX SIZE 25”X30” |

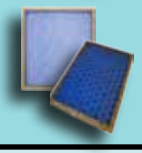
Flanders®
FOREMOST IN AIR FILTRATION

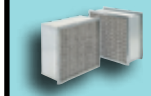
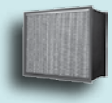
# PrecisionAire
## *Model Number / Description*

| "ITEM# PREFIX" | DESCRIPTION | ITEM # & SIZING INFORMATION |
|---|---|---|
| **FCP**** | FCP CARBON PLEAT (200 = STANDARD CAP / 300 = HIGH CAP) | ACTIVATED CARBON FILLED NONWOVEN MEDIA ADSORBERS |
| **81255** | PLEAT CHARCOAL - NO DOUBLES AVAILABLE | MIN. SIZE 6"x6" / MAX SIZE 25"X30" |
| **80055D**<br>**Double** | PRE PLEAT 40 LPD - STANDARD CAPACITY<br>DOUBLE FILTERS OVER 30" - MERV 8 | MIN. SIZE 25"X30" / MAX. SIZE 25"X60" OR 30"X50"<br>ANYTHING OVER 60" IS CONSIDERED A TRIPLE AND NEEDS TO BE ORDERED SEPARATE |
| **80255** | PREPLEAT 40 LPD - HIGH CAPACITY - MERV 8 | MIN. SIZE 6"X6" / MAX SIZE 25"X30" |
| **80255D**<br>**Double** | PREPLEAT 40 LPD - HIGH CAPACITY - MERV 8<br>DOUBLE FILTERS OVER 30" | MAX. SIZE 25"X60" OR 30"X50" |
| **80755** | ELEMENT PLT MDL 40 | |
| **85655** | PRE PLEAT 40 62RM11 - STANDARD - MERV 11<br>MIN. SIZE 6"X6" MAX. SIZE 25"X30" | MIN. SIZE 6"X6" MAX. SIZE 25"X30" |
| **85655D**<br>**Double** | PRE PLEAT 40 62RM11 - STANDARD - MERV 11<br>DOUBLE FILTERS OVER 30" | MIN. SIZE 25"X30" / MAX. SIZE 25"X60" OR 30"X50" |
| **85755** | PRE PLEAT 40 62RM11 - HI-CAPACITY - MERV 11 | MIN. SIZE 6"X6" / MAX. SIZE 25"X30" |
| **85755D**<br>**Double** | PRE PLEAT 40 62RM11 - HI-CAPACITY - MERV 11<br>DOUBLE FILTERS OVER 30" | MIN. SIZE 25"X30" / MAX. SIZE 25"X60" OR 30"X50" |
| **90013** | PRE PLEAT 40 M13 | MIN. SIZE 6"X6" / MAX SIZE 25"X30 |
| **90013D**<br>**Double** | PRE PLEAT 40 M13<br>DOUBLE FILTERS OVER 30" | MIN. SIZE 25"X30" / MAX. SIZE 25"X60" OR 30"X50" |
| **PAP*** ** | PRECISION PAK - FIBERGLASS OR SYNETHTIC MEDIA | * INSERT NUMBER OF POCKETS (EXAMPLE: PAP4) |
| | MODEL #'s: PAP***S (SYN) OR PAP***G (GLASS) | ** INSERT 50, 65, 85 OR 95 EFFICIENCY |
| **XDH***S** | PRECISION PAK XDH - SYNTHETIC MEDIA BAG FILTER | * INSERT NUMBER OF POCKETS (EXAMPLE: XDH4) |
| **PRP**S** | RIGID AIR - SYNTHETIC MEDIA | **** INSERT 55, 65, 85 OR 95 EFFICIENCY** |
| **PRP**** | RIGID AIR - GLASS MEDIA | **** INSERT 55, 65, 85 OR 95 EFFICIENCY** |
| **THE BELOW NEEDS TO BE PUT ON A SEPARATE PURCHASE ORDER** | | |
| **8**55** | PRECISIONCELL | **** INSERT 60, 80 OR 90 EFFICIENCY** |
| **8**55** | PRECISIONCELL II 95% | **** INSERT 66, 86 OR 96 EFFICIENCY** |
| | SUPER-FLOW V | **CONTACT FACTORY FOR ASSISTANCE** |

# Product Cross-Reference



| Flanders Corporation | | American Air Filter | Airguard | Camfil Farr | Tri-Dim | Koch | Purolator | Filtration Group | Glasfloss |
|---|---|---|---|---|---|---|---|---|---|
|  | Pinch Frame | 5700 | TRI-PLEX 85 | | Tri-Glass | C&I Disposable | Delta P | | |
|  | Series ST55, 225T, 325T and 425T | AmerSeal | Activator Series | | Tri-Dek | Maxi-Grid | Bio-Pure | FR-1/M3 | Phoenix Series |
|  | HD Industrial Grade | Heavy Duty | Depta P | | | | Delta P | | |
|  | EZ Flow® | Industrial Panel | | | | | | | Disposable Panel |
| | EZ Flow® II | StrataDensity | F312 | | | | F312 | | GDS Series |
|  | VP-MERV 8 | Perfect Pleat SC M8 | DP Pleat | Aeropleat IV | ULTRA Series | Multi-Pleat | Key Pleat | Nova Pleat | Z Line ZXP |
|  | Pre Pleat® 40 LPD | Perfect Pleat M8 | Type DP/DP Max | Farr 30/30 | Tri-Pleat LX8 | Multi-Pleat XL8 | Defiant Mark 80D | Aerostar Series 400 | Z Line Series |
| | Pre Pleat® 40 LPD HC | Perfect Pleat Ultra | Type DP/DP Max | Farr 30/30 | Tri-Pleat LX8 | Multi-Pleat XL8 | Defiant Mark 80D | Aerostar Series 400 HC | Z Line Series |
|  | Pre Pleat® 62RM11 | AmAir 1100 | Powerguard | AP-Eleven | Tri-Pleat LX11 | Multi-Pleat XL11 | PAF 11 | Aerostar Series 1100 | MR-11 |
|  | Pre Pleat® M13 | AmAir 1300 | DP-green 13 | AP-Thirteen | Tri-Pleat Green | Multi-Pleat Green 13 | PURO-Green 13 | Aerostar M13 Green Pleat | MR-13 |
|  | PrecisionPak | DriPak | Venti-Pak | Hi-Flo | Tri-Sac | Multi-Sak Series G | Serva-Pak | Fiberglass Pocket | PuraPak |
|  | PrecisionPak XDH | DriPak 2000 | Clean-Pak Multiguard | S-Flo | Micro-Pac 99 Syn Pac | Multi-Sak Series S | Serva-Pak Defiant | SoniQ | Excel |

| Flanders Corporation | | American Air Filter | Airguard | Camfil Farr | Tri-Dim | Koch | Purolator | Filtration Group | Glasfloss |
|---|---|---|---|---|---|---|---|---|---|
|  | Rigid Air | Varicel RF | VariPak | Riga-Flo | Syn-Pac R/ Tri-Cell R | Multi-Flo | Aero-Cell Defiant Cell | Rigid Cell | Z-Pak |
|  | PrecisionCell® | VariCel | Variflow | Aeropac | Tri-Cell | Multi-Cell | Serva-Cell | ASHRAE Cell | Magna |
|  | PrecisionCell® II | VariCel II | Variflow II | Opti-Pac | Tri-Cell IV | MicroMAX | Serva-Cell MP-4 | | Puracell II |
|  | Super-Flow® V | Varicell V/ Varicell VXL | Vari+Plus/ Vari+Plus VP | Durafil ES | Predator Tri-Cell VRC | Duramax 4V | Serva-Cell VA/Serva-Cell PV | FP Mini-Pleat | Puracell V |
|  | PrecisionCell® M16 | None Avaliable | | | | | | | |
|  | Alpha 95 | BioCell I | Microguard 95 | Micretain | Micro-Cell 95 | BioMAX 95% DOP | Ultra-Cell 95 | Aerostar 95 | Magna 950 |
|  | Alpha Cell | Astro-Cel / Megacel/ MegaCel I | Micro-guard | Absolute | Tri-Pure HEPA | BioMAX | Ultra-Cell | Aerostar HEPA | Magna HEPA |
|  | Flanders Pureform® | None Avaliable | | | | | | | |
|  | Flanders Dimple-Pleat® | Astro-Cel II | MicroPleat | Megalam | Tri=Pure Panel | BioMAX CS | MI-CROPAK | UltraStar | |
| | Flanders Dimple-Pleat® | None Avaliable | | | | | | | |

Flanders®
FOREMOST IN AIR FILTRATION

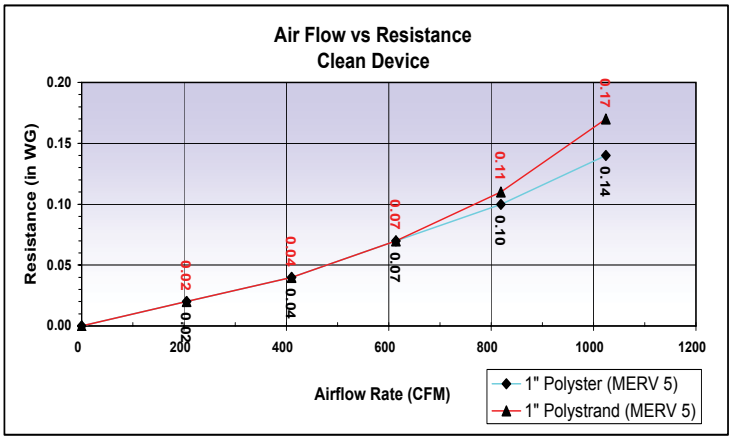
# PolyStrand® Media

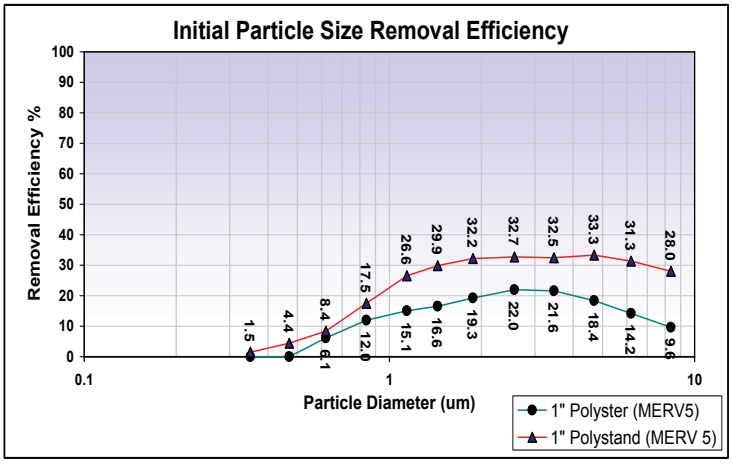
***A New Generation of Fibers***

***Bulletin PB3002-0408***

## Media

Flanders Corporation now offers PolyStrand®, a new-engineered poly coated fiber media to be utilized in polyester throwaway filters. This technology improves the standard polyester media by totally encapsulating the fibers in Poly$^{b}$, an exclusive technology resulting in gentle, safe and soft media. Poly$^{b}$ is also the industry's first true 100% fiber tackification process, TotalTac, a remarkably efficient dust and paint particle gathering substance, incorporated during manufacturing, that permeates the entire media.




## Important Features

- Poly-coated fiber media
- Media safe and soft to handle
- Improved particle size efficiency
- Utilize for any application where polyester panel fibers are recommended
- Protects furnace and central air units in residential and light commercial applications

# HD Industrial Grade

## Heavy Duty, Spun Glass and Synthetic Disposable Filters

Model #'s 11255 (Synthetic) and #10255 (Glass)

***PB100-0612***



### General

Flanders HD Industrial Grade filters are designed for use in any application where disposable panel filters are recommended. They can be relied upon for superior performance since they are specifically designed for heavy workloads. A wide range of standard face sizes is available, plus nearly any "special" size.

### Construction

Flanders HD Industrial Grade filters are designed with a one-piece moisture-resistant chipboard frame enclosing media. Standard frames are nominal 1 inch thick (3/4 inch actual) and nominal 2 inches thick (1-5/8 inches actual).

The fiberglass media filter consists of continuous-filament fibers bonded together with thermo-setting resin. The synthetic media filter consists of polystrand.

Support grilles of perforated corrosion resistant steel or expanded metal are provided on both sides of the filter. The media pads and support grilles are continuously glued to the inside perimeter of the frame, resulting in exceptional strength and rigidity. This design virtually eliminates the possibility of media sag within the frame.

### Physical Data

Frame:One-piece moisture-resistant chipboard

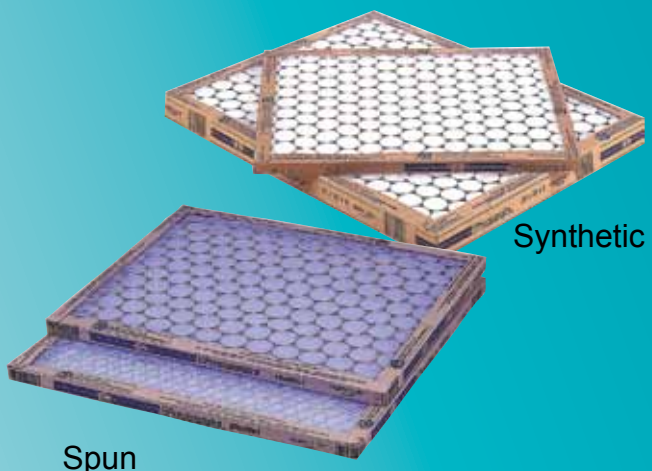
Media: Fiberglass or Synthetic / PolyStrand®

Support Grille: Perforated corrosion-resistant steel or expanded wire on both sides of the filter

Sealant: Hot-melt resin

### Important Features

- One-piece moisture-resistant chipboard frame prevents broken corners
- Support grilles on both sides for exceptional strength
- Media and grilles continuously glued to the inside perimeter of the frame for rigidity
- Filters are UL Class 900 listed
- 1/2 inch, 1 inch, 2 inch depths
- Special sizes available upon request
- MERV 4



## Standard Sizes — Performance Data - HD Industrial Grade

| Nominal Size (in.) | Actual Size H x W x D (in) | cfm @ 300 fpm | Standard Carton Qty. | Weight per Carton (lbs.) |
|---|---|---|---|---|
| 10x10x1 | 9-5/8 x 9-5/8 x 3/4 | 208 | 12 | 3.3 |
| 10x20x1 | 9-5/8 x 19-5/8 x 3/4 | 417 | 12 | 5.2 |
| 10x24x1 | 9-5/8 x 23-5/8 x 3/4 | 500 | 12 | 6.1 |
| 10x25x1 | 9-5/8 x 24-5/8 x 3/4 | 521 | 12 | 6.5 |
| 10x30x1 | 9-5/8 x 29-5/8 x 3/4 | 625 | 12 | 7.0 |
| 12x12x1 | 11-5/8 x 11 -5/8 x 3/4 | 300 | 12 | 4.0 |
| 12x20x1 | 11-5/8 x 19-5/8 x 3/4 | 500 | 12 | 5.8 |
| 12x24x1 | 11-5/8 x 23-5/8 x 3/4 | 600 | 12 | 6.7 |
| 12x25x1 | 11-5/8 x 24-5/8 x 3/4 | 625 | 12 | 7.5 |
| 12x30x1 | 11-5/8 x 29-5/8 x 3/4 | 749 | 12 | 8.0 |
| 14x14x1 | 13-5/8 x 13-5/8 x 3/4 | 408 | 12 | 5.2 |
| 14x20x1 | 13-5/8 x 19-5/8 x 3/4 | 583 | 12 | 6.2 |
| 14x24x1 | 13-5/8 x 23-5/8 x 3/4 | 700 | 12 | 7.3 |
| 14x25x1 | 13-5/8 x 24-5/8 x 3/4 | 729 | 12 | 7.7 |
| 14x30x1 | 13-5/8 x 29-5/8 x 3/4 | 875 | 12 | 10.5 |
| 15x20x1 | 14-5/8 x 19-5/8 x 3/4 | 625 | 12 | 6.7 |
| 15x25x1 | 14-5/8 x 24-5/8 x 3/4 | 781 | 12 | 6.8 |
| 16x16x1 | 15-5/8 x 15-5/8 x 3/4 | 533 | 12 | 6.3 |
| 16x20x1 | 15-1/2 x 19-1/2 x 3/4 | 667 | 12 | 6.9 |
| 16x24x1 | 15-5/8 x 23-5/8 x 3/4 | 800 | 12 | 8.5 |
| 16x25x1 | 15-3/4 x 24-5/8 x 3/4 | 833 | 12 | 8.3 |
| 18x20x1 | 17-5/8 x 19-5/8 x 3/4 | 750 | 12 | 8.0 |
| 18x24x1 | 17-5/8 x 23-5/8 x 3/4 | 900 | 12 | 9.0 |
| 18x25x1 | 17-5/8 x 24-5/8 x 3/4 | 938 | 12 | 9.6 |
| 19x27x1 | 18-5/8 x 26-5/8 x 3/4 | 1069 | 12 | 11.8 |
| 20x20x1 | 19-1/2 x 19-1/2 x 3/4 | 833 | 12 | 7.9 |
| 20x24x1 | 19-5/8 x 23-5/8 x 3/4 | 1000 | 12 | 9.5 |
| 20x25x1 | 19-1/2 x 24-1/2 x 3/4 | 1042 | 12 | 9.5 |
| 20x30x1 | 19-5/8 x 29-5/8 x 3/4 | 1250 | 12 | 12.5 |
| 22x22x1 | 21-5/8 x 21-5/8 x 3/4 | 1008 | 12 | 9.5 |
| 24x24x1 | 23-5/8 x 23-5/8 x 3/4 | 1200 | 12 | 11.3 |
| 24x30x1 | 23-5/8 x 29-5/8 x 3/4 | 1500 | 12 | 14.3 |
| 25x25x1 | 24-5/8 x 24-5/8 x 3/4 | 1302 | 12 | 13.5 |
| 10x10x2 | 9-5/8 x 9-5/8 x 1-5/8 | 208 | 12 | 3.9 |
| 10x20x2 | 9-5/8 x 19-5/8 x 1-5/8 | 417 | 12 | 6.6 |
| 12x24x2 | 11-1/2 x 23-1/2 x 1-5/8 | 600 | 12 | 8.0 |
| 14x20x2 | 13-5/8 x 19-5/8 x 1-5/8 | 584 | 12 | 9.1 |
| 14x25x2 | 13-5/8 x 24-5/8 x 1-5/8 | 730 | 12 | 10.5 |
| 15x20x2 | 14-5/8 x 19-5/8 x 1-5/8 | 625 | 12 | 9.6 |
| 16x20x2 | 15-5/8 x 19-1/2 x 1-5/8 | 667 | 12 | 9.6 |
| 16x24x2 | 15-5/8 x 23-1/2 x 1-5/8 | 800 | 12 | 11.6 |
| 16x25x2 | 15-5/8 x 24-1/2 x 1-5/8 | 834 | 12 | 11.6 |
| 18x24x2 | 17-5/8 x 23-5/8 x 1-5/8 | 900 | 12 | 12.8 |
| 20x20x2 | 19-1/2 x 19-1/2 x 1-5/8 | 834 | 12 | 11.9 |
| 20x24x2 | 19-1/2 x 23-1/2 x 1-5/8 | 1000 | 12 | 14.2 |
| 20x25x2 | 19-1/2 x 24-1/2 x 1-5/8 | 1042 | 12 | 14.0 |
| 24x24x2 | 23-1/2 x 23-1/2 x 1-5/8 | 1200 | 12 | 16.0 |
| 25x25x2 | 24-5/8 x 24-5/8 x 1-5/8 | 1302 | 12 | 17.2 |

Typical initial (clean) pressure drop at nominal cfm is 0.07 in. w.g. for 1 in. filters and 0.10 in. w.g. for 2 in. filters. Recommended final resistance is 0.50 in. w.g., but the system design may dictate a lower change out point.

## Guide Specifications

***1.0 General***

1.1 Disposable filters shall be Model HD Industrial Grade filters as manufactured by Flanders.

1.2 Filters shall be UL Class 900 listed.

***2.0 Filter Construction***

2.1 Filters shall be constructed of fiberglass or synthetic media (as specified) enclosed in a one-piece chipboard frame.

2.2 Perforated corrosion resistant steel or expanded metal support grilles shall be furnished on both entry and exit sides of the filter.

2.3 Media and grilles shall be continuously glued to the inside perimeter of the frame.

***3.0 Performance***

3.1 The manufacturer shall guarantee performance as stated in its literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# EZ Flow & EZ Flow II

## Disposable Air Filters

Model #'s 10055 (No-Metal) and #10155 (Metal)

***Bulletin PB101-0612***

### General

EZ Flow and EZ Flow II disposable filters are designed for protection of furnace and central air units in residential and light commercial applications. Construction of both models is identical except for the media retainer. The EZ Flow features a metal media retainer on the downstream side while the EZ Flow II has no media retainer. Instead, the media itself is adhered directly to the frame for non-metallic applications.

### Construction

The frame is made from heavy chipboard in a one-piece design that eliminates corner separation.

The filtering media is continuous filament spun glass. A resinous bonding agent provides rigidity and resistance to media compression.

MEDIA SUPPORT of the EZ Flow is provided by one metal retainer on the downstream side, either punched metal plate or expanded metal, depending on face size. The EZ Flow II is made to function without a retainer, by adhering the frame directly to the media which has a light skin to make it self-retaining.

SEALING is accomplished with a resilient hot-melt adhesive running the full perimeter of the frame on both upstream and downstream sides.

UL MARKING appears on the filter frame. These filters have been tested by Underwriters Laboratories Inc. and are classified as UL Class 900 for flammability.

### Important Features

- One-piece frame
- UL Class 900
- UPC marked
- No media retainer on EZ Flow II
- Metal media retainer on EZ Flow
- 1/2 in., 1 in. & 2 in. depths
- All standard sizes plus special sizes
- MERV 4

## Standard Sizes

## Performance Data - EZ Flow & EZ Flow II

| Nominal Size (in.) | Actual Size H x W x D (in) | cfm @ 300 fpm | Standard Carton Qty. | Weight per Carton (lbs.) |
|---|---|---|---|---|
| 10x10x1 | 9-5/8 x 9-5/8 x 3/4 | 208 | 12 | 3.3 |
| 10x20x1 | 9-5/8 x 19-5/8 x 3/4 | 417 | 12 | 5.6 |
| 10x24x1 | 9-5/8 x 23-5/8 x 3/4 | 500 | 12 | 6.1 |
| 10x25x1 | 9-5/8 x 24-5/8 x 3/4 | 521 | 12 | 6.5 |
| 10x30x1 | 9-5/8 x 29-5/8 x 3/4 | 625 | 12 | 5.8 |
| 12x12x1 | 11-5/8 x 11-5/8 x 3/4 | 300 | 12 | 4.0 |
| 12x20x1 | 11-5/8 x 19-5/8 x 3/4 | 500 | 12 | 5.8 |
| 12x24x1 | 11-5/8 x 23-5/8 x 3/4 | 600 | 12 | 6.7 |
| 12x25x1 | 11-5/8 x 24-5/8 x 3/4 | 625 | 12 | 7.5 |
| 12x30x1 | 11-5/8 x 29-5/8 x 3/4 | 749 | 12 | 7.8 |
| 14x14x1 | 13-5/8 x 13-5/8 x 3/4 | 408 | 12 | 5.2 |
| 14x20x1 | 13-5/8 x 19-5/8 x 3/4 | 583 | 12 | 6.2 |
| 14x24x1 | 13-5/8 x 23-5/8 x 3/4 | 700 | 12 | 7.3 |
| 14x25x1 | 13-5/8 x 24-5/8 x 3/4 | 729 | 12 | 7.7 |
| 14x30x1 | 13-5/8 x 29-5/8 x 3/4 | 875 | 12 | 10.5 |
| 15x25x1 | 14-5/8 x 24-5/8 x 3/4 | 781 | 12 | 6.8 |
| 15x20x1 | 14-5/8 x 19-5/8 x 3/4 | 625 | 12 | 6.7 |
| 15x30x1 | 14-5/8 x 30-1/2 x 3/4 | 957 | 12 | 9.8 |
| 16x16x1 | 15-5/8 x 15-5/8 x 3/4 | 533 | 12 | 6.0 |
| 16x20x1 | 15-1/2 x 19-1/2 x 3/4 | 667 | 12 | 6.9 |
| 16x22x1 | 15-5/8 x 22-1/8 x 3/4 | 742 | 12 | 8.3 |
| 16x24x1 | 15-5/8 x 23-5/8 x 3/4 | 800 | 12 | 8.5 |
| 16x25x1 | 15-3/4 x 24-5/8 x 3/4 | 833 | 12 | 8.3 |
| 18x20x1 | 17-5/8 x 19-5/8 x 3/4 | 750 | 12 | 8.0 |
| 18x24x1 | 17-5/8 x 23-5/8 x 3/4 | 900 | 12 | 9.0 |
| 18x25x1 | 17-5/8 x 24-5/8 x 3/4 | 938 | 12 | 9.6 |
| 19x27x1 | 18-5/8 x 26-5/8 x 3/4 | 1069 | 12 | 11.8 |
| 20x20x1 | 19-1/2 x 19-1/2 x 3/4 | 833 | 12 | 7.9 |
| 20x22x1 | 19-5/8 x 22-1/8 x 3/4 | 938 | 12 | 9.3 |
| 20x24x1 | 19-5/8 x 23-5/8 x 3/4 | 1000 | 12 | 9.5 |
| 20x25x1 | 19-5/8 x 24-5/8 x 3/4 | 1042 | 12 | 9.5 |
| 20x30x1 | 19-5/8 x 29-5/8 x 3/4 | 1250 | 12 | 12.5 |
| 22x22x1 | 21-5/8 x 21-5/8 x 3/4 | 1008 | 12 | 9.5 |
| 24x24x1 | 23-5/8 x 23-5/8 x 3/4 | 1200 | 12 | 11.3 |
| 24x30x1 | 23-5/8 x 29-5/8 x 3/4 | 500 | 12 | 14.3 |
| 25x25x1 | 24-5/8 x 24-5/8 x 3/4 | 1302 | 12 | 13.5 |
| 10x10x2 | 9-5/8 x 9-5/8 x 1-5/8 | 208 | 12 | 3.9 |
| 10x20x2 | 9-5/8 x 19-5/8 x 1-5/8 | 417 | 12 | 6.6 |
| 12x24x2 | 11-1/2 x 23-1/2 x 1-5/8 | 600 | 12 | 8.0 |
| 14x20x2 | 13-5/8 x 19-7/8 x 1-5/8 | 584 | 12 | 9.1 |
| 14x25x2 | 13-5/8 x 24-7/8 x 1-5/8 | 730 | 12 | 10.5 |
| 15x20x2 | 14-5/8 x 19-5/8 x 1-5/8 | 625 | 12 | 9.6 |
| 16x20x2 | 15-5/8 x 19-1/2 x 1-5/8 | 667 | 12 | 9.6 |
| 16x24x2 | 15-5/8 x 23-1/2 x 1-5/8 | 800 | 12 | 11.6 |
| 16x25x2 | 15-5/8 x 24-1/2 x 1-5/8 | 834 | 12 | 11.6 |
| 18x24x2 | 17-5/8 x 23-5/8 x 1-5/8 | 900 | 12 | 12.8 |
| 20x20x2 | 19-1/2 x 19-1/2 x 1-5/8 | 834 | 12 | 11.9 |
| 20x24x2 | 19-1/2 x 23-1/2 x 1-5/8 | 1000 | 12 | 14.2 |
| 20x25x2 | 19-1/2 x 24-1/2 x 1-5/8 | 1042 | 12 | 14.0 |
| 24x24x2 | 23-1/2 x 23-1/2 x 1-5/8 | 1200 | 12 | 16.0 |
| 25x25x2 | 24-5/8 x 24-5/8 x 1-5/8 | 1302 | 12 | 17.2 |

Notes:

1. Contact your local representative or the factory for additional standard sizes. Special sizes are also available.
2. Manufacturing tolerances are +0 in., -1/8 in. on height and width.
3. Nominal cfm is calculated at 300 fpm gross face velocity.
4. Typical initial (clean) pressure drop at nominal cfm is 0.07 in. w.g. for 1 in. filters and 0.10 in. w.g. for 2 in. filters.
5. Recommended final resistance is 0.50 in. w.g., but the system design may dictate a lower changeout point.

# Modified Channel Frame

## *Disposable Panel Air Filters*

Model #'s 11256 (No-Metal)

***Bulletin PB103-0612***

### General

The Flanders Modified Channel Frame disposable air filter provides the user with a product of unusual quality and strength.

Originally designed for light commercial and industrial applications, the Flanders Modified Channel Frame filter is an excellent choice for use in residential furnace systems.

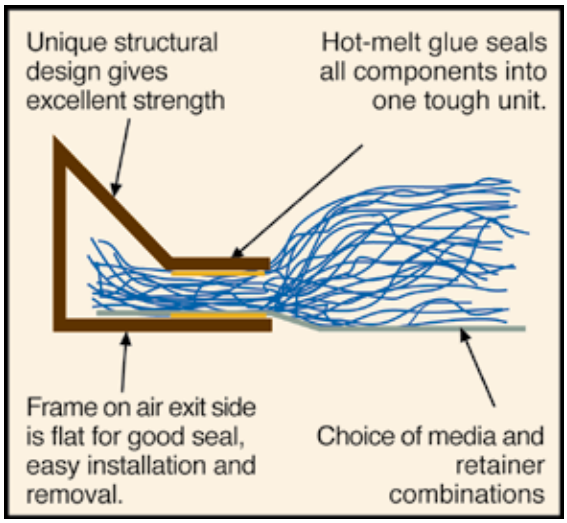
The filter is produced on state-of-the-art production line machinery that compresses a one-piece channel frame onto the media and retainer. The result is a filter of consistent high quality at a competitive price.

### Construction

The one-piece channel frame is formed into a wedge which slopes to the center on the upstream side and is flat on the air exit side. The one-piece feature, eliminates problems associated with four-piece frames, such as broken corners and exposed metal edges. This flat air exit side distinguishes the Modified Channel filters from ordinary pinch frame filters that may be difficult to install/remove and which may not seal well in the filter channel.

A notched frame design allows the filters to nest, creating savings advantage of approximately 30-35% in warehouse space and freight costs.

A double bead of hot melt glue running the full perimeter of the frame is used to bond all components into one tough unit. This process permits the use of a single metal grid on the air exit side only or no metal grid at all, thus maximizing filter face area to extend service life.




### Important Features

- One-piece chipboard frame prevents broken corners and exposed metal.
- Heat-sealed frame provides unusual strength and serviceability.
- A metal grid on the air-exit side assures more open face area and longer service life.
- Resinated polyester media provides resistance to moisture.
- Filters are UL Class 900 listed.
- MERV 4

## Guide Specifications

***1.0 General***

1.1 Disposable filters shall be by Flanders.

1.2 Filters shall be UL Class 900 listed.

***2.0 Filter Construction***

2.1 Media pack for the Flanders MCS shall be 100% nonwoven polyester synthetic fibers chemically bonded with a fire retardant resin.

2.2 Media pack for the Flanders MCS shall be PolyStrand®

***3.0 Performance***

3.1 The manufacturer shall guarantee performance as stated in its literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

# Ring Panels, Links, Sleeves and Cubes

*Bulletin FMPB200-0612*



## Rugged, Heat-sealed,Construction

Flanders Ring Panel and Cube filters are made by heat sealing layers of synthetic filtering media together over an interior, corrosion-resistant steel support frame. An over-cut of media outside the sealforms a built-in gasket (selvage) between the wire support frame and holding frame, which secures the filter and prevents air bypass. This special feature allows these filters to be installed without the use of retainer fasteners

## Link Panels

Flanders Ring Panel filters can be ordered as standard single panels or as link panels. A link panel is made by heat sealing individual Ring Panel filter panels end to end to achieve desired dimensions.

## Sleeve Panels

Sleeve Panels are nearly identical to the standard Ring Panel. The only major difference in construction with the Sleeve Panel is that one end is left unsealed. Therefore, the interior support frame can be removed and used over and over again, with just the soiled media thrown away. This is more economical and makes disposal easier.

## Cubes

Cubes are internally supported filters similar to the Polyester Panel. The exception is greater surface area for contamination capture. Unitary, 2-pocket or 3-pocket construction is available throughout our entire product offering. Cubes are available with 13/16” thick headers for side access installations or other systems where a header is required.

## A Moisture-resistant Alternative

Because these filters are made with only metal and synthetic materials, they are an excellent alternative to paper-frame filters in high moisture areas because they are naturally moisture-resistant and will not deteriorate or warp in wet or humid conditions.

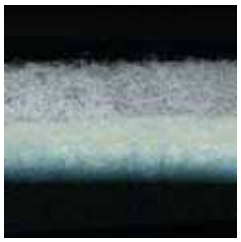
## Important Features

- Heat sealed construction
- Tackified, progressive density media
- 2, 3 and 4-ply combinations
- 100% moisture resistant
- 9 gauge galvanized wire frame
- MERV 6-10 available
- UL Class 900

## Series ST55-Polyester Panel

*Models ST55R-xxxx Ring Panel and ST55L-xxxx Link*

Two-ply 1” nominal media construction using a 1/2” nominal white polyester on the upstream, followed by a 1/2” nominal green super tackified polyester downstream.



## Series 225T-Polyester Panel or Cubes

*Models 225RT-xxxx Ring Panel, 225LT-xxxx Link,*
*CUBx225T-xxxxxx Cube*

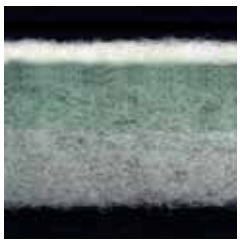
Two-ply 1” nominal media construction, using a 3/4” nominal white polyester on the up-stream, with internal tackification followed by a 1/4” dense white polyester downstream.

## Series 325T-Polyester Panel or Cubes

*Models 325RT-xxxx Ring Panels and 325LT-xxxx Links*

*CUBx325T-xxxxxx Cube*

Three-ply 1-3/4” nominal media construction, using a 1-1/2” nominal white/green dual density, multidenier polyester upstream, with internal tackification followed by a 1/4” dense white polyester downstream.



## Series 425T-Polyester Panel or Cubes

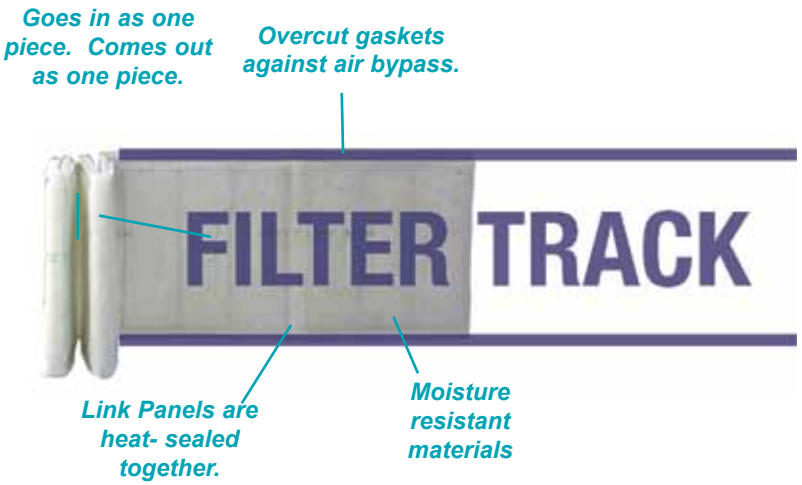
*Models 425RT-xxxx Ring Panels and 425LT-xxxx Links*

*CUBx425T-xxxxxx Cube*

Four-ply 1-3/4” nominal media construction, using a 1-1/2” nominal white/green/white tridensity, multidenier polyester upstream,with internal tackification followed by a 1/4” dense white polyester downstream.

### Use link panels for easy installation in filter tracks and eliminate air bypass!

Link panels make installation easy. Just unfold the filter and slide it into the track as one continuous, long filter. When time to replace it, the whole filter comes out easily in one piece. Plus, the sealing between links and the generous selvedge eliminates air bypass.



# Cut-to-Fit

## *Kwik Kuts, Hammock, Permaire and Service Rolls and Pads*

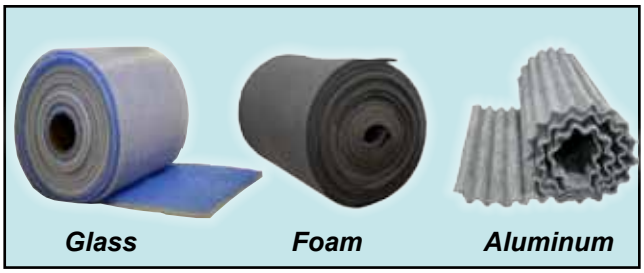
***Bulletin: PB500-0612***

### Service Rolls

Flanders Service Rolls air filtration media are manufactured in selected widths, prepared in roll lengths that make manageable roll sizes. In most cases, a single cut across the roll will produce a ready-to-install filter pad.

The following media are offered as service rolls:

Spun Glass: *(Models SGxxxxKK)* This is a rigid, nominal 3/8" thick, dry spun glass. It is typically used to make rigid pads for use in room unit air conditioners. It is designed for use without a frame. Since it is untreated, it will not harm the plastic frequently used in the construction of room units.



***Glass*** ***Foam*** ***Aluminum***

Foam: *(Models FRxxxxx)* A rugged polyurethane foam that is designed for use in room unit air conditioners and in pad-holding frames. It is washable and will withstand repeated cleaning with mild soap and water. Foam service rolls are available in 1/4", 1/2", 1" and 2" media thicknesses. They are washable for repeat use.

Aluminum: *(Models EAxx)* The aluminum service roll is an expanded aluminum mesh of the type used in room unit air conditioners. It is a nominal 1/4" thick dry filter media that requires the addition of a dust adhesive for effective filtration.

### Kwik Kuts

These are 15"x24" pads of filter media that can be easily cut to fit any window or wall mounted room air conditioner. They are offered in the same spun glass, foam and aluminum media described above. Also offered are 1/2" Permaire (see column at right) and plastic-backed foam.


### Hammock Rolls and Pads

Flanders hammock rolls are available in nominal 1" spun glass, 2" spun glass, and 1" polyester synthetic fiber media. Performance data on all Flanders hammock media is available upon request.

Typically, these are for Lennox type furnaces. (Lennox is a brand name. It is used here for system identification only.)


Hammock rolls are 20 foot rolls of media cut in various widths. In most cases, a single cut across the roll will produce a ready-to-use filter pad. Flanders hammock rolls are packaged in a handy carton that can be used as a dispenser. Media used in all Flanders hammock rolls are UL Class 900 fire rated. The 1" spun glass is also available in pre-cut hammock pads, individually packaged in plastic.

### Permaire Rolls and Pads

Permaire is a unique type of air filtration media that has evolved from a natural organic fiber media to a new completely synthetic, self-supporting and completely washable media. It has all the benefits of organic media but has a longer service life, better structural integrity as well as being completely

odor free. It is made of synthetic fibers and coated with a special resin, then baked together at a high temperature. The result of this process is a tough and springy, thoroughly bonded, nearly rigid air filtration media.

Describing Permaire as merely an air filtration medium is telling only half of the story. Due to its natural rigidity, a pad of Permaire cut to the proper dimensions is actually a complete filter ready to install. It is totally self supporting. With nothing more than Permaire and a hefty pair of scissors or a razor knife, you can replace almost any size 1/2", 1" or 2" framed panel filter.

Permaire filters are passive electrostatic type products. Air running over the maze of fibers creates an electrostatic charge to catch and hold airborne contaminants. Dust particles may become charged naturally, and if so, they are held by strong electrostatic forces to the oppositely charged fiber with which they come into contact. The smaller a particle or fiber, the relatively stronger the electrostatic charges will be attained. Dirt loads throughout the filter's depth and therefore it will hold a lot more dust than other filters before requiring changing or cleaning.

Permaire is an ideal product for filter service professionals. With a roll of Permaire on your truck, you can replace almost any size panel filter. It's a perfect answer to "odd" size filters. A 10x32" special" is as close as a pair of scissors...and the same low cost as a 16x20 standard that you cut from the same roll. Model # HH (rolls) and 40655 (pads)

### Hogs Hair Rolls

Hogs Hair is a unique type of filtraton media consisting of natural organic fibers. Only available in rolls, its specifications meet the above noted Permaire Rolls. Contact your account specialist about the natural Hogs Hair media – Part # HHB.

# Bulk Media and Pads

## *Cut -To-Fit Room Air Conditioner, Furnace and Central Air Filters*

***Bulletin: PB502-0612***

### Wide selection of media types

Flanders offers a wide range of top quality air filtration media available in bulk rolls and pads. Considering the unique characteristics of each offering, the user can get maximum value for filter dollar spent with relation to the intended use.

Bulk media rolls are offered in selected slit widths with roll lengths determined by manufacturing processes. Pre-cut pads, as the name implies, are pads of filtration media cut to standard filter face sizes or to your desired custom sizes.

Spun glass is a rugged industry standard, known for low resistance while providing excellent arrestance and high dust holding capacity. They are designed to trap dirt throughout their thickness. A resinous bonding agent in the media increases rigidity and resistance to compression so the filter will not collapse in the airstream. Flashpoint is 325 degrees Fahrenheit on the treated adhesive.

### Spun Glass

***7/8" Blue Production Glass*** *(Models GMxx)* Nominal 7/8" adhesive-treated spun glass. For residential or light industrial and commercial air filtration. Commonly used for 1" depth disposable panel air filter production and for pad and frame systems.

***Blue on White Industrial Glass*** *(Models Gxxx)* Nominal 1" and 2" adhesive treated spun glass. For industrial and commercial air filtration with fairly heavy dirt loads. Commonly used for pad and frame systems and hammock rolls. Tinted blue on the air entering side.

***4" "Railroad" Glass*** Nominal 4 " spun glass for air filtration in railroad diesel engines. Manufactured according to customer specifications.

***3/8" A/C Media*** *(Models ACxx)* Nominal 3/8 " untreated (no adhesive) blue on white spun glass. Makes rigid pads for use in room air conditioning units.

### Polyester Synthetic Fiber

Polyester Synthetic Fiber (PSF) media is extremely resilient and will withstand direct moisture. In many cases, a psf media is the ideal alternative to spun glass. It makes an excellent prefilter for high efficiency filters and offers a high arrestance and dust holding capacity.

***PSF 5DT, 1DT, 2DT*** *(Models 5Txx, 1Txx and 2Txx)* Dry, untreated psf media in nominal 1/2 ", 1 " and 2 " thickness for a wide range of filtration applications. White and blue with blue on the air exit side.

***ST55*** *(Models PRELK55Gxx)* Nominal 1/2 " tackified psf. Light green and white with green on the air exit side.

***Pre-T*** *(Models PTxx)* Pre-T is an extremely rugged psf designed for repeated cleaning by washing or vacuuming. Dry, untreated. Nominal 1/2 " thickness only. Red and purple with purple on the air exit side.

***PS125*** *(Models PS125-xx)* Nominal 1 " untreated psf which is reinforced with a scrim backing on the downstream side.

***PSF Series 225, 325, 425*** *(Models ENTRY225T-xx, ENTRY325T-xx, ENTRY425T-xx)* Series 225 is nominal 1 " dual denier tackified media; 325 is nominal 1-1/2 " three denier tackified and 425 is nominal 1-1/2 " four denier tackified.


7/8" Blue
Production Glass
Blue on White
Industrial Glass
330G Glass
Paint Arrestor Media
331Y Glass
Paint Arrestor Media
332 Glass & Poly
Paint Arrestor Media
Railroad Glass
Series 225
Synthetic
Series 325
Synthetic
Series 425
Synthetic
1OR
Synthetic
2OR
Synthetic
PSF5DT
PSF1DT
PSF2DT
ST55
Pre-T
PS125
FP3

# Auto Rolls

## *Automatic Roll Filter Replacement*

***Bulletin: PB900-1104***

Flanders automatic roll replacements are furnished wound on spools or cores, ready for installation without modification or adaptors. A core selection guide is printed on the back of this sheet. Six-foot-long kraft paper leaders and trailers are secured to the ends of every roll. Each roll contains 65 linear feet of filtering media in selected widths. Rolls are wrapped in heavy plastic and packed in cartons for shipment. The following media types are available:

### Scrim-back spun glass

*(Models AESx, BLCSxx, CBSx, FSx, CRSx, CSx, AMSx, TSxx, LRSx)*

A nominal 2" thickness progressive density spun glass treated with dust-catching adhesive. The roll is backed on the downstream side with a scrim mesh. Density of the scrim is approximately 3 squares per square inch.

### Skin-back spun glass

*ModelsAEx, BLCx, CBx, Fxx, CRx, Cx, AMx, Tx, LRxx)*

A nominal 2" thickness progressive density spun glass treated with dust-catching adhesive. The roll is backed on the downstream side with a spun glass "skin".

### Economy spun glass

*(Models AEECx, BLECxx, CBECx, FECx, CRECx, CECxx, AMECx, TECx, LRECx)*

A nominal 2" thickness spun glass with a very light spun glass skin on the downstream side which is reinforced with a scrim mesh. Density of the scrim is approximately 1 square per square inch. Media weight is about two-thirds that of the standard scrim-back glass.

### Polyester

*(Models AEPx, BLCPxx, CBPx, FPx, CRPUx, CPUxx, AMPx, TPx, LRPxx)*

A nominal 1/2" thickness dry, non-woven polyester synthetic fiber medium, reinforced on the downstream side with a scrim backing. Scrim density is approximately 3 grids per square inch.

### Treated Polyester

*(Models AEPTx, BLCPTxx, CBTx, FPTx, CRPTx, CPTxx, AMPTx, TPTx, LRPTx, LAPTxx)*

Same medium as the polyester described above, but treated with a dust-catching adhesive.


L - Designed to fit commercial "FulFlo" and Mine Safety Appliance machines. Core consists of 3" ID fiberboard tube with drive pin 2-1/2" from one end.

F - Designed to fit Farr "Roll Kleen". Core consists of 2-1/8" ID fiberboard tube. No drive pin, discs or cups.

AM - Designed to fit Airmaze "Roll-A-Maze". Core consists of 1-7/8" ID fiberboard tube with metal cup recessed 5/8" each end. A rectangular slot, 1-1/2 x 3/4", is stamped in each cup.

T - Designed to fit Trane Company "Roll Filter". Core consists of 2-7/16" ID fiberboard tube with metal cup in each end, recessed 1-1/2" A 1-1/2" square is stamped in each cup.

CR - Designed to fit Carrier series 31NA and 31NC. Core is 27/167"

BLC - Designed to fit BLC Industries. Consists of a 1-1/2" metal pipe with 2 drive pins that are 1-3/8" from core end, and with 11" end plates.

AE - Designed to fit American Air Filter "Roll-O-Matic". Core consists of 3/4" ID metal pipe with metal end plates approximately 11" diameter attached on each end.

CB - Designed to fit Cambridge "Autoroll". Core consists of 3/4" metal pipe, no end plates unless specified on order.

C - Designed to fit Continental "Conomanual" or "Conomatic". Core consists of 3" ID fiberboard tube with a drive pin 2-1/2" from one end.

| Rolls To Fit: | Filter Size & Type | Size Number | Actual Size |
|---|---|---|---|
| American Air Filter Roll-O-Matic | 2 | 2AE | 23-3/4" x 65' |
| | 3, 33 | 3AE, 33AE | 32-3/4" x 65' |
| | 4,45 | 4AE, 45AE | 44-3/4" x 65' |
| | 5 | 5AE | 56-3/4" x 65' |
| | 6 | 6AE | 68-3/4" x 65' |
| | 21 | 21AE | 20-1/2" x 65' |
| | 22 | 22AE | 22-1/4" x 65' |
| | 25 | 25AE | 24-7/8" x 65' |
| | 32 | 32AE | 31-7/8" x 65' |
| | 39 | 39AE | 38-1/2" x 65' |
| | 40 | 40AE | 39-7/8" x 65' |
| | | 81AE | 81" x 65' |
| BLC Industries | 2 | BLCSP25 | 24-5/8" x 65' |
| | 3 | BLCSP35 | 34-5/8" x 65' |
| | 3'4" | BLCSP39 | 38-5/8" x 65' |
| | 4 | BLCSP47 | 46-5/8" x 65' |
| | 5 | BLCSP59 | 58-5/8" x 65' |
| | 6 | BLCSP71 | 70-5/8" x 65' |
| Cambridge Filter Corp. and/or Electro Air Cleaner | 2 | 2CB | 23-7/8" x 65' |
| | 3 | 3CB | 32-7/8" x 65' |
| | 4 | 4CB | 44-7/8" x 65' |
| | 5 | 5CB | 56-7/8" x 65' |
| | 6 | 6CB | 65-7/8" x 65' |
| | 6 | 6HCB | 68-7/8" x 65' |
| Farr Co. Kleen Filters | 3, 30, 32 | 3F | 33" x 65' |
| | 4, 40, 42 | 4F | 45" x 65' |
| | 5, 50, 52 | 5F | 57" x 65' |
| | 6 | 6F | 69" x 65' |
| | 12 | 12F | 9" x 65' |
| | 18 | 18F | 15" x 65' |
| | 20, 22 | 20F | 21" x 65' |
| | 26, 28 | 26F | 27" x 65' |
| | 36, 38 | 36F | 39" x 65' |
| | 46, 48 | 46F | 51" x 65' |
| Carrier Series 31NA | 2,8,12 | 2CR | 26-1/4" x 65' |
| | 3,8,21 | 3CR | 37-1/4" x 65' |
| | 4,26,32 | 4CR | 47-1/4" x 65' |
| | 6,39 | 6CR | 61-1/4" x 65' |

| Rolls To Fit: | Filter Size & Type | Size Number | Actual Size |
|---|---|---|---|
| Carrier Series 31NC (Reverse Wound) | 8,10,12 | 24CR | 23-1/2" x 65' |
| | 15,18,21 | 35CR | 34-1/2" x 65' |
| | 26,32 | 44CR | 44" x 65' |
| | 39 | 58CR | 58" x 65' |
| | 48,57 | 68CR | 65" x 65' |
| Continental Air Filter (Conomanual & Conomatic) | 2 | 22C | 21-7/8" x 65' |
| | 3 | 3C | 31-7/8" x 65' |
| | 4 | 4C | 43-7/8" x 65' |
| | 5 | 5C | 55-7/8" x 65' |
| | 6 | 6C | 67-7/8" x 65' |
| | 6 | 36C | 35-7/8" x 65' |
| Air Maze (Roll A Maze) | 2 | 2AM | 20-1/2" x 65' |
| | 3 | 3AM | 32-1/2" x 65' |
| | 4 | 4AM | 44-1/2" x 65' |
| | 5 | 5AM | 56-1/2" x 65' |
| | 6 | 6AM | 68-1/2" x 65' |
| Trane Company Roll Filters | RF 3, 7 | 3T | 19-3/8" x 65' |
| | RF 6, 9 | 6T | 21-3/8" x 65' |
| | RF 8,10,17,21 | 8T | 31-3/8" x 65' |
| | RF 12,14,24,25 | 12T | 35-3/8" x 65' |
| | RF 31 | 31T | 45-3/8" x 65' |
| | RF 35 | 35T | 54-3/8" x 65' |
| | RF 41 | 41T | 59-3/8" x 65' |
| | RF 50 | 50T | 63-3/8" x 65' |
| | RF 63 | 31T (2) | 45-3/8" x 65' (2) |
| | | 26T | 25-3/4" x 65' |
| | | 38T | 38-3/4" x 65' |
| | | 51T | 50-1/4" x 65' |
| | | 61T | 61-3/4" x 65' |
| Commercial Filter Corp. (FulFlo) | 3, 30 | 3L | 33" x 65' |
| | 4, 40 | 4L | 45" x 65' |
| | 5, 50 | 5L | 57" x 65' |
| | 6, 60 | 6L | 69" x 65' |
| Mine Safety Appliances, Inc. (MSA) | 20 | 20L | 21" X 65' |
| | 26 | 26L | 27" X 65' |
| | 36 | 36L | 39" X 65' |
| | 46 | 46L | 51" X 65' |
| | | 56L | 63" X 65' |

Flanders®
FOREMOST IN AIR FILTRATION

# VP-MERV 8

***MERV 8A Extended Surface Pleated Filter***

ENVIRONMENTALLY FRIENDLY

Model #'s 80285 (High) and 80085 (Standard),

***Bulletin: PB708-0112***

## General

Air filters are designed for dust holding (filter life), pressure drop (energy use), and MERV (particle removal efficiency). The VP-MERV 8 Pleated filter achieves MERV 8A efficiency with low resistance to airflow per ASHRAE 52.2-2007, Appendix J. Its filtering medium does not rely on electrostatic charge to capture particulate which will dissipate over time and during use.

The VP-MERV 8 Pleated filters can upgrade existing flat panels, as well as competitive MERV 6-7 pleated filters. Filters are available in 1, 2 and 4-inch depths. VP-MERV 8 Pleated filters are available in a wide range of sizes and will fit most commercial and industrial installations with little or no system modification. Fasteners are available to adapt the filter to existing filter banks.

## Installation Considerations

VP-MERV 8 Pleated filters are suitable as primary filters and can be installed in PF-1 Frames, K-Trac Framing Modules, Surepleat Side Access Housings and similar existing hardware. They may be used as prefilters for Precision Pak, Super-Flow® V, PrecisionCell and Rigid-Air filters in these frame systems and in Sureseal Side Access Housings.

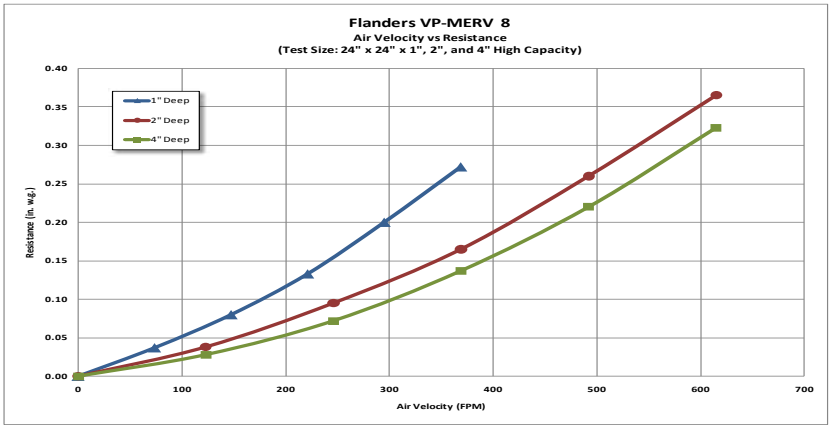
## Physical Data

Media: 100% Non-woven synthetic media manufactured from recyclable material

Media Support: Diamond-shaped expanded metal

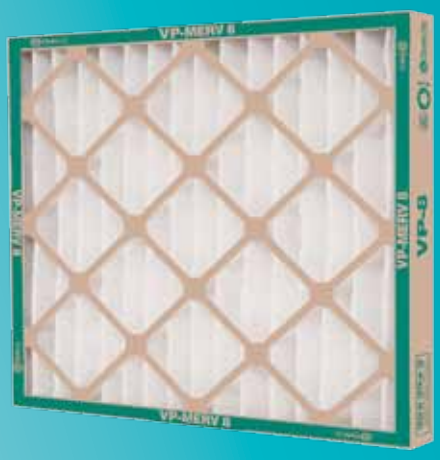
Pleat Design: V-Pleat

Frame: Unbleached, natural Kraft-board




## Important Features

- Ecologically advanced filtration medium made from recyclable materials.
- The VP-MERV 8 is available in standard and high capacity air flow.
- Media maximizing V-pleat design.
- Expanded metal grid prevents media flutter while in operation.
- Diagonal and horizontal support members provide frame strength.
- Filter media pack is sealed to eliminate air bypass.
- MERV 8A per ASHRAE 52.2-2007, Appendix J.



# Capacities and Dimensions

| Nominal Depth (in.) | Nominal Size WxHxD (in.) | Standard Capacity | | | | | | High Capacity | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 300 FPM | | 500 FPM | | Media Area (sq. ft.) | Wt. Each (lbs.) | 300 FPM | | 500 FPM | | Media Area (sq. ft.) | Wt. Each (lbs.) |
| | | CFM | PD | CFM | PD | | | CFM | PD | CFM | PD | | |
| 1" Std. Cap. 13 ppf / High Cap. 15 ppf | 10x10x1 | 208 | 0.22 | 347 | - | 1.1 | 0.2 | 208 | 0.20 | 347 | - | 1.3 | 0.2 |
| | 10x20x1 | 417 | 0.22 | 694 | - | 2.3 | 0.3 | 417 | 0.20 | 694 | - | 2.7 | 0.3 |
| | 12x20x1 | 500 | 0.22 | 833 | - | 2.7 | 0.3 | 500 | 0.20 | 833 | - | 3.1 | 0.3 |
| | 12x24x1 | 600 | 0.22 | 1000 | - | 3.2 | 0.3 | 600 | 0.20 | 1000 | - | 3.7 | 0.4 |
| | 14x20x1 | 583 | 0.22 | 972 | - | 3.3 | 0.3 | 583 | 0.20 | 972 | - | 3.7 | 0.4 |
| | 14x25x1 | 729 | 0.22 | 1215 | - | 4.1 | 0.4 | 729 | 0.20 | 1215 | - | 4.6 | 0.5 |
| | 15x20x1 | 625 | 0.22 | 1042 | - | 3.5 | 0.4 | 625 | 0.20 | 1042 | - | 3.9 | 0.4 |
| | 16x20x1 | 667 | 0.22 | 1111 | - | 3.7 | 0.4 | 667 | 0.20 | 1111 | - | 4.1 | 0.4 |
| | 16x25x1 | 833 | 0.22 | 1389 | - | 4.6 | 0.5 | 833 | 0.20 | 1389 | - | 5.2 | 0.5 |
| | 18x24x1 | 900 | 0.22 | 1500 | - | 4.9 | 0.5 | 900 | 0.20 | 1500 | - | 5.7 | 0.6 |
| | 18x25x1 | 938 | 0.22 | 1563 | - | 5.2 | 0.5 | 938 | 0.20 | 1563 | - | 5.9 | 0.6 |
| | 20x20x1 | 833 | 0.22 | 1389 | - | 4.5 | 0.5 | 833 | 0.20 | 1389 | - | 5.1 | 0.5 |
| | 20x24x1 | 1000 | 0.22 | 1667 | - | 5.4 | 0.5 | 1000 | 0.20 | 1667 | - | 6.2 | 0.6 |
| | 20x25x1 | 1042 | 0.22 | 1736 | - | 5.7 | 0.6 | 1042 | 0.20 | 1736 | - | 6.4 | 0.6 |
| | 24x24x1 | 1200 | 0.22 | 2000 | - | 6.4 | 0.6 | 1200 | 0.20 | 2000 | - | 7.4 | 0.7 |
| | 25x25x1 | 1302 | 0.22 | 2170 | - | 7.2 | 0.7 | 1302 | 0.20 | 2170 | - | 8.3 | 0.8 |
| 2" Std. Cap. 10 ppf / High Cap. 15 ppf | 10x20x2 | 417 | 0.16 | 694 | 0.30 | 4.3 | 0.4 | 417 | 0.12 | 694 | 0.26 | 6.2 | 0.5 |
| | 12x20x2 | 500 | 0.16 | 833 | 0.30 | 4.8 | 0.5 | 500 | 0.12 | 833 | 0.26 | 7.2 | 0.5 |
| | 12x24x2 | 600 | 0.16 | 1000 | 0.30 | 5.8 | 0.6 | 600 | 0.12 | 1000 | 0.26 | 8.7 | 0.6 |
| | 14x20x2 | 583 | 0.16 | 972 | 0.30 | 5.8 | 0.5 | 583 | 0.12 | 972 | 0.26 | 8.6 | 0.6 |
| | 14x25x2 | 729 | 0.16 | 1215 | 0.30 | 7.2 | 0.7 | 729 | 0.12 | 1215 | 0.26 | 10.8 | 0.8 |
| | 15x20x2 | 625 | 0.16 | 1042 | 0.30 | 6.2 | 0.6 | 625 | 0.12 | 1042 | 0.26 | 9.1 | 0.7 |
| | 16x20x2 | 667 | 0.16 | 1111 | 0.30 | 6.7 | 0.6 | 667 | 0.12 | 1111 | 0.26 | 9.6 | 0.7 |
| | 16x25x2 | 833 | 0.16 | 1389 | 0.30 | 8.4 | 0.7 | 833 | 0.12 | 1389 | 0.26 | 12.0 | 0.9 |
| | 18x24x2 | 900 | 0.16 | 1500 | 0.30 | 8.7 | 0.8 | 900 | 0.12 | 1500 | 0.26 | 13.3 | 0.9 |
| | 18x25x2 | 938 | 0.16 | 1563 | 0.30 | 9.0 | 0.8 | 938 | 0.12 | 1563 | 0.26 | 13.8 | 1.0 |
| | 20x20x2 | 833 | 0.16 | 1389 | 0.30 | 8.2 | 0.7 | 833 | 0.12 | 1389 | 0.26 | 12.0 | 0.9 |
| | 20x24x2 | 1000 | 0.16 | 1667 | 0.30 | 9.8 | 0.9 | 1000 | 0.12 | 1667 | 0.26 | 14.4 | 1.0 |
| | 20x25x2 | 1042 | 0.16 | 1736 | 0.30 | 10.2 | 0.9 | 1042 | 0.12 | 1736 | 0.26 | 15.0 | 1.1 |
| | 24x24x2 | 1200 | 0.16 | 2000 | 0.30 | 11.5 | 1.0 | 1200 | 0.12 | 2000 | 0.26 | 17.3 | 1.2 |
| | 25x25x2 | 1302 | 0.16 | 2170 | 0.30 | 12.6 | 1.1 | 1302 | 0.12 | 2170 | 0.26 | 19.3 | 1.3 |
| 4" Std. Cap. 9 ppf / High Cap. 13 ppf | 12x24x4 | 600 | 0.11 | 1000 | 0.23 | 11.1 | 1.0 | 600 | 0.10 | 1000 | 0.22 | 16.5 | 1.0 |
| | 16x20x4 | 667 | 0.11 | 1111 | 0.23 | 12.3 | 1.0 | 667 | 0.10 | 1111 | 0.22 | 18.0 | 1.2 |
| | 16x25x4 | 833 | 0.11 | 1389 | 0.23 | 15.5 | 1.3 | 833 | 0.10 | 1389 | 0.22 | 22.6 | 1.4 |
| | 18x24x4 | 900 | 0.11 | 1500 | 0.23 | 17.3 | 1.4 | 900 | 0.10 | 1500 | 0.22 | 24.2 | 1.5 |
| | 20x20x4 | 833 | 0.11 | 1389 | 0.23 | 15.4 | 1.3 | 833 | 0.10 | 1389 | 0.22 | 22.3 | 1.4 |
| | 20x24x4 | 1000 | 0.11 | 1667 | 0.23 | 18.6 | 1.5 | 1000 | 0.10 | 1667 | 0.22 | 24.0 | 1.7 |
| | 20x25x4 | 1042 | 0.11 | 1736 | 0.23 | 19.3 | 1.6 | 1042 | 0.10 | 1736 | 0.22 | 27.7 | 1.8 |
| | 24x24x4 | 1200 | 0.11 | 2000 | 0.23 | 22.3 | 1.8 | 1200 | 0.10 | 2000 | 0.22 | 28.8 | 2.0 |
| | 25x29x4 | 1510 | 0.11 | 2517 | 0.23 | 28.4 | 2.4 | 1510 | 0.10 | 2517 | 0.22 | 28.4 | 2.7 |

Note: Pressure Drop represents average clean pressure drop in inches w.g. The recommended final pressure drop for all models is 1.0" w.g. System design may dictate a lower change-out point.

## Guide Specifications

1.0 General

1.1 Medium efficiency filters shall be MERV 8A Pleat extended surface pleated filters manufactured by Flanders.

1.2 Filter sizes and capacities shall be as scheduled on the drawings.

2.0 Construction

2.1 Filters shall be constructed of reinforced, non-woven synthetic media made from recyclable plastic. Media shall be laminated to an expanded metal grid on the air leaving side and formed into V-configuration pleats.

2.2 Frame shall be recyclable, unbleached natural Kraft-board with diagonal and horizontal support members on the upstream and downstream sides, and shall have interlocking corner tabs.

3.0 Performance

3.1 Media area must equal or exceed that of the specified filter.

3.2 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7 of ARI Standard 850.

3.3 The filter shall be MERV 8A by ASHRAE Standard 52.2-2007, Appendix J.

4.0 Performance

4.1 Manufacturer shall issue a standard certificate of compliance certifying that the filter meets the materials, components, performance and construction characteristics stated herein.

Flanders®
FOREMOST IN AIR FILTRATION

# Pre Pleat® 40 LPD

***MERV 8A Extended Surface Pleated Filters***

Model #'s 80255 (High), 80055 (Standard)

***Bulletin: PB700-0312***

## General

Flanders has led the world in filter media development and the application of high efficiency filtration for over 60-years. Originally introduced in 2004, the industry's first MERV 8 filter operating solely on mechanical means has now been improved! Since 2004, other manufacturers have altered media blends to meet the LEED® and market driven demand for non-electret MERV 8 filters. This has led to pressure drop increases in their filters of 25% or more!

Utilizing a unique new fiber technology, our Research & Development Team has now achieved multiple goals of maintaining MERV 8A performance at a resistance that is 40% lower than competition. At the same time, the LPD's Dust Holding Capacity remains the highest in the industry. All this while operating on 100% mechanical principles - Remarkable!

Air filters are designed for dust holding (filter life), pressure drop (energy use), and MERV (particle removal efficiency). Flanders Pre Pleat 40 LPD achieves the highest **dust holding capacity** and the **lowest pressure drop** in the industry, while maintaining a mechanical MERV 8A per ASHRAE Standard 52.2-2007, Appendix J. Classified UL Class 900.

## Installation Considerations

Distinctions can be made in air filter technology. Flanders is committed to continuously developing new and improved products to assist in an environmentally responsible, healthy, and prosperous environment.

The Pre Pleat 40 LPD high and standard capacity pleated panel filters are suitable as pre filters but are best suited for heavy duty commercial, industrial, pharmaceutical, as well as other industrial applications where high dust holding is required. The Pre Pleat 40 LPD can be installed in PF-1 Holding Frames, K-Trac Framing Modules, Surepleat Side Access Housings and Bag-In / Bag-Out Containment housings.

## Operating Temperature Limits

Maximum operating temperature is 180° F (82.22° C).

**Physical Data**

**Media:** 100% Non-woven synthetic media manufactured from recyclable material

**Media Support:** Diamond-shaped expanded metal

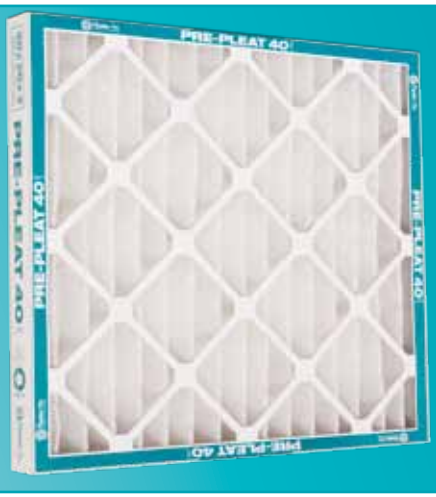
**Pleat Design:** V-Pleat

**Pleat Count:**
Economy Standard: 1”=13, 2”=10, 4”=9
High Capacity: 1”=15, 2”=15, 4”=13

**Frame:** Moisture-resistant clay coated frame made with recyclable material

### Important Features

- Ecologically advanced filtration medium made from recyclable materials
- Media maximizing V-pleat design
- Expanded metal grid prevents media flutter while in operation
- Diagonal and horizontal support members provide frame strength
- Filter media pack is sealed to eliminate air bypass
- Average efficiency is 30-35% per ASHRAE 52.1-92
- Average arrestance is 93%
- MERV 8A per ASHRAE 52.2-2007, Appendix J



# Capacities and Dimensions

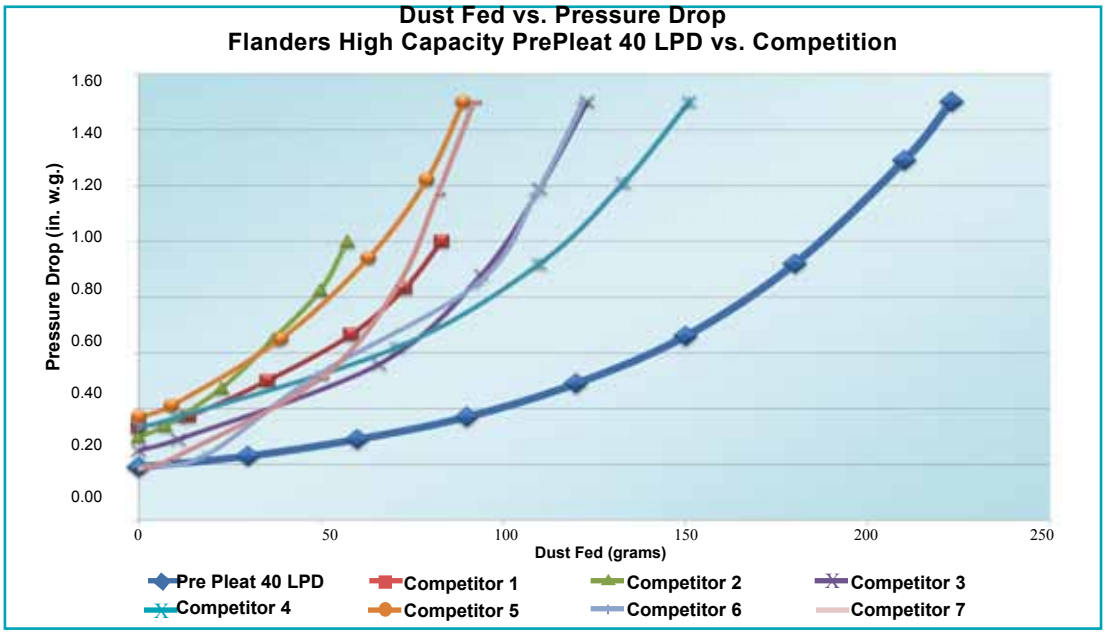
| Nominal Depth (in.) | Nominal Size WxHxD (in.) | Standard Capacity | | | | | | High Capacity | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 300 FPM | | 500 FPM | | Media Area (sq. ft.) | Wt. Each (lbs.) | 300 fpm | | 500 FPM | | Media Area (sq. ft.) | Wt. Each (lbs.) |
| | | CFM | PD | CFM | PD | | | cfm | PD | CFM | PD | | |
| 1" Std. Capacity 13 ppf / High Capacity 15 ppf | 10x10x1 | 208 | 0.17 | 347 | - | 1.1 | 0.2 | 208 | 0.15 | 347 | - | 1.3 | 0.2 |
| | 10x20x1 | 417 | 0.17 | 694 | - | 2.3 | 0.3 | 417 | 0.15 | 694 | - | 2.7 | 0.3 |
| | 12x20x1 | 500 | 0.17 | 833 | - | 2.7 | 0.3 | 500 | 0.15 | 833 | - | 3.1 | 0.3 |
| | 12x24x1 | 600 | 0.17 | 1000 | - | 3.2 | 0.3 | 600 | 0.15 | 1000 | - | 3.7 | 0.4 |
| | 14x20x1 | 583 | 0.17 | 972 | - | 3.3 | 0.3 | 583 | 0.15 | 972 | - | 3.7 | 0.4 |
| | 14x25x1 | 729 | 0.17 | 1215 | - | 4.1 | 0.4 | 729 | 0.15 | 1215 | - | 4.6 | 0.5 |
| | 15x20x1 | 625 | 0.17 | 1042 | - | 3.5 | 0.4 | 625 | 0.15 | 1042 | - | 3.9 | 0.4 |
| | 16x20x1 | 667 | 0.17 | 1111 | - | 3.7 | 0.4 | 667 | 0.15 | 1111 | - | 4.1 | 0.4 |
| | 16x25x1 | 833 | 0.17 | 1389 | - | 4.6 | 0.5 | 833 | 0.15 | 1389 | - | 5.2 | 0.5 |
| | 18x24x1 | 900 | 0.17 | 1500 | - | 4.9 | 0.5 | 900 | 0.15 | 1500 | - | 5.7 | 0.6 |
| | 18x25x1 | 938 | 0.17 | 1563 | - | 5.2 | 0.5 | 938 | 0.15 | 1563 | - | 5.9 | 0.6 |
| | 20x20x1 | 833 | 0.17 | 1389 | - | 4.5 | 0.5 | 833 | 0.15 | 1389 | - | 5.1 | 0.5 |
| | 20x24x1 | 1000 | 0.17 | 1667 | - | 5.4 | 0.5 | 1000 | 0.15 | 1667 | - | 6.2 | 0.6 |
| | 20x25x1 | 1042 | 0.17 | 1736 | - | 5.7 | 0.6 | 1042 | 0.15 | 1736 | - | 6.4 | 0.6 |
| | 24x24x1 | 1200 | 0.17 | 2000 | - | 6.4 | 0.6 | 1200 | 0.15 | 2000 | - | 7.4 | 0.7 |
| | 25x25x1 | 1302 | 0.17 | 2170 | - | 7.2 | 0.7 | 1302 | 0.15 | 2170 | - | 8.3 | 0.8 |
| 2" Std. Capacity 10 ppf / High Capacity 15 ppf | 10x20x2 | 417 | 0.11 | 694 | 0.21 | 4.3 | 0.4 | 417 | 0.10 | 694 | 0.20 | 6.2 | 0.5 |
| | 12x20x2 | 500 | 0.11 | 833 | 0.21 | 4.8 | 0.5 | 500 | 0.10 | 833 | 0.20 | 7.2 | 0.5 |
| | 12x24x2 | 600 | 0.11 | 1000 | 0.21 | 5.8 | 0.6 | 600 | 0.10 | 1000 | 0.20 | 8.7 | 0.6 |
| | 14x20x2 | 583 | 0.11 | 972 | 0.21 | 5.8 | 0.5 | 583 | 0.10 | 972 | 0.20 | 8.6 | 0.6 |
| | 14x25x2 | 729 | 0.11 | 1215 | 0.21 | 7.2 | 0.7 | 729 | 0.10 | 1215 | 0.20 | 10.8 | 0.8 |
| | 15x20x2 | 625 | 0.11 | 1042 | 0.21 | 6.2 | 0.6 | 625 | 0.10 | 1042 | 0.20 | 9.1 | 0.7 |
| | 16x20x2 | 667 | 0.11 | 1111 | 0.21 | 6.7 | 0.6 | 667 | 0.10 | 1111 | 0.20 | 9.6 | 0.7 |
| | 16x25x2 | 833 | 0.11 | 1389 | 0.21 | 8.4 | 0.7 | 833 | 0.10 | 1389 | 0.20 | 12.0 | 0.9 |
| | 18x24x2 | 900 | 0.11 | 1500 | 0.21 | 8.7 | 0.8 | 900 | 0.10 | 1500 | 0.20 | 13.3 | 0.9 |
| | 18x25x2 | 938 | 0.11 | 1563 | 0.21 | 9.0 | 0.8 | 938 | 0.10 | 1563 | 0.20 | 13.8 | 1.0 |
| | 20x20x2 | 833 | 0.11 | 1389 | 0.21 | 8.2 | 0.7 | 833 | 0.10 | 1389 | 0.20 | 12.0 | 0.9 |
| | 20x24x2 | 1200 | 0.11 | 2000 | 0.21 | 9.8 | 0.9 | 1200 | 0.10 | 2000 | 0.20 | 14.4 | 1.0 |
| | 20x25x2 | 1042 | 0.11 | 1736 | 0.21 | 10.2 | 0.9 | 1042 | 0.10 | 1736 | 0.20 | 15.0 | 1.1 |
| | 24x24x2 | 1200 | 0.11 | 2000 | 0.21 | 11.5 | 1.0 | 1200 | 0.10 | 2000 | 0.20 | 17.3 | 1.2 |
| | 25x25x2 | 1302 | 0.11 | 2170 | 0.21 | 12.6 | 1.1 | 1302 | 0.10 | 2170 | 0.20 | 19.3 | 1.3 |
| 4" Std. Capacity 9 ppf / High Capacity 13 ppf | 12x24x4 | 600 | 0.10 | 1000 | 0.19 | 11.1 | 1.0 | 600 | 0.09 | 1000 | 0.17 | 16.5 | 1.0 |
| | 16x20x4 | 667 | 0.10 | 1111 | 0.19 | 12.3 | 1.0 | 667 | 0.09 | 1111 | 0.17 | 18.0 | 1.2 |
| | 16x25x4 | 833 | 0.10 | 1389 | 0.19 | 15.5 | 1.3 | 833 | 0.09 | 1389 | 0.17 | 22.6 | 1.4 |
| | 18x24x4 | 900 | 0.10 | 1500 | 0.19 | 17.3 | 1.4 | 900 | 0.09 | 1500 | 0.17 | 24.2 | 1.5 |
| | 20x20x4 | 833 | 0.10 | 1389 | 0.19 | 15.4 | 1.3 | 833 | 0.09 | 1389 | 0.17 | 22.3 | 1.4 |
| | 20x24x4 | 1000 | 0.10 | 1667 | 0.19 | 18.6 | 1.5 | 1000 | 0.09 | 1667 | 0.17 | 24.0 | 1.7 |
| | 20x25x4 | 1042 | 0.10 | 1736 | 0.19 | 19.3 | 1.6 | 1042 | 0.09 | 1736 | 0.17 | 27.7 | 1.8 |
| | 24x24x4 | 1200 | 0.10 | 2000 | 0.19 | 22.3 | 1.8 | 1200 | 0.09 | 2000 | 0.17 | 28.8 | 2.0 |
| | 25x29x4 | 1510 | 0.10 | 2517 | 0.19 | 28.4 | 2.4 | 1510 | 0.09 | 2517 | 0.17 | 28.4 | 2.7 |

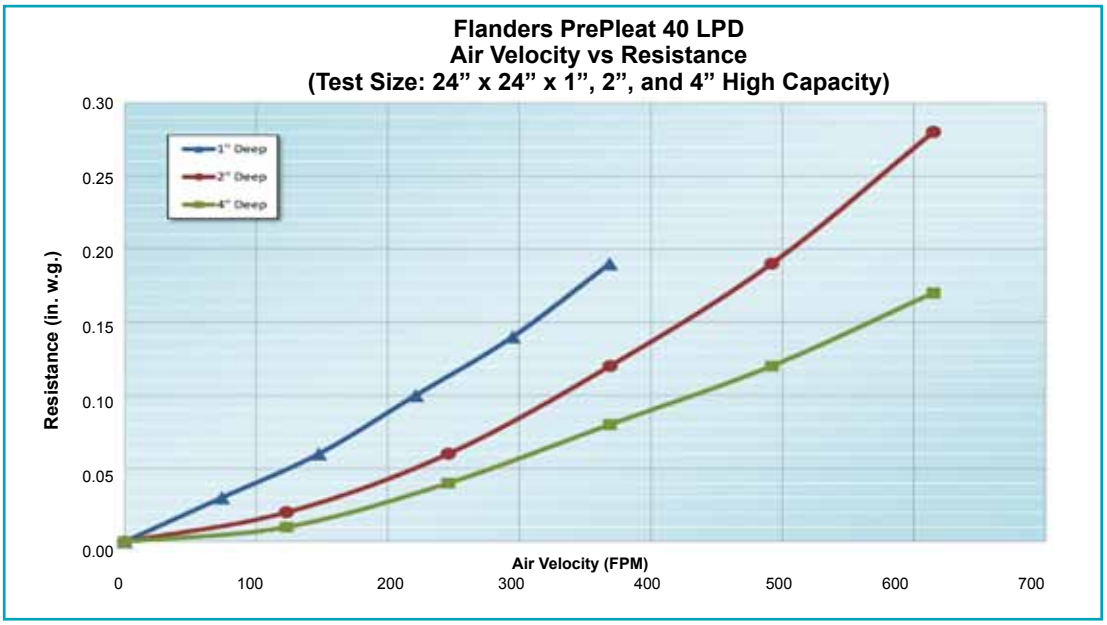


**Notes:**

1. PD represents clean pressure drop in inches w.g. The recommended final pressure drop for all models is 1.0 in. w.g. System design may dictate a lower change-out point.
2. Actual filter face size for 12x24 and 24x24 filters is 5/8 in. under on height and width. Actual face size on all other sizes is 1/2 in. under on height and width.
3. Actual filter depth is 1/4 inch under for these nominal 1-inch, 2-inch and 4-inch deep filters. For capacities other than those shown, ratio the face velocities.
4. Efficiency is not affected by the conditioning steps outlined in ASHRAE 52.2-2007 per Appendix J.

## Dust Loading / Resistance Curve




**Notes:**

1. The Pre Pleat 40 LPD maintains efficiency values during conditioning tests.
2. A nominal 24" x 24" x 2" High Capacity pleat has a dust holding capacity of 195 grams.
3. All data per ASHRAE 52.2, latest revision. Independent test reports are available upon request.

Flanders®
FOREMOST IN AIR FILTRATION

# Pre Pleat® 62RM11

MERV 11 Pleated Filters

Model # 85655 (Standard) & 85755 (High)

***Bulletin: PB7022-0612***

## General

Pre Pleat 62RM11 pleated panel filter enables a significant upgrade in collection efficiency over existing MERV 8 products at the same resistance levels. A 25-30% average efficiency filter can be upgraded to 60-65% efficiency at roughly the same resistance levels.

Bi-component media: Our next-generation ultra-high performance bi-component synthetic media contains mechanically engineered tri-lobal fibers with inhomogenous domains of positive and negative Electret charges within the bi-component fibers to equal an ultra-high performance product.

Enhanced fibers: Mechanically and electrostatically enhanced fibers are precisely structured into a progressive density gradient structure to enhance airflow through put with less resistance while providing high dust holding capacity and ultra-high efficiency during operational life.

Gradient media structure: Proprietary "Engineered Gradient Media Structure" enables larger incoming contaminants to be trapped in the pre-filter layer thus allowing the highly charged secondary layer to attract and hold smaller particulate, thereby increasing the life of more expensive final filters downstream.

High efficiency at low pressure drop: This proprietary media combined with Flanders unique V-Pleat manufacturing design equals the highest performance pleat available on the market today. The proprietary PrePleat 62RM11 can provide an initial efficiency of MERV 11, (60-65%) at a resistance of .30" wg on the high capacity model.

## Physical Data

**Media:** Progressive density bicomponent fibers

**Airflow Resistance:**

High Capacity PrePleat 62RM11 tested at .30” w.g. @ 2000 cfm (500 fpm).

Standard Capacity is .34” w.g. @ 2000 cfm.

**Media Support:** Diamond-shaped expanded meta

**Pleat Design:** V Pleat

**Frame:** Moisture-resistant clay coated frame

**Pleat Count:** 1"-13, 2"-10, 4"-9.



## Important Features

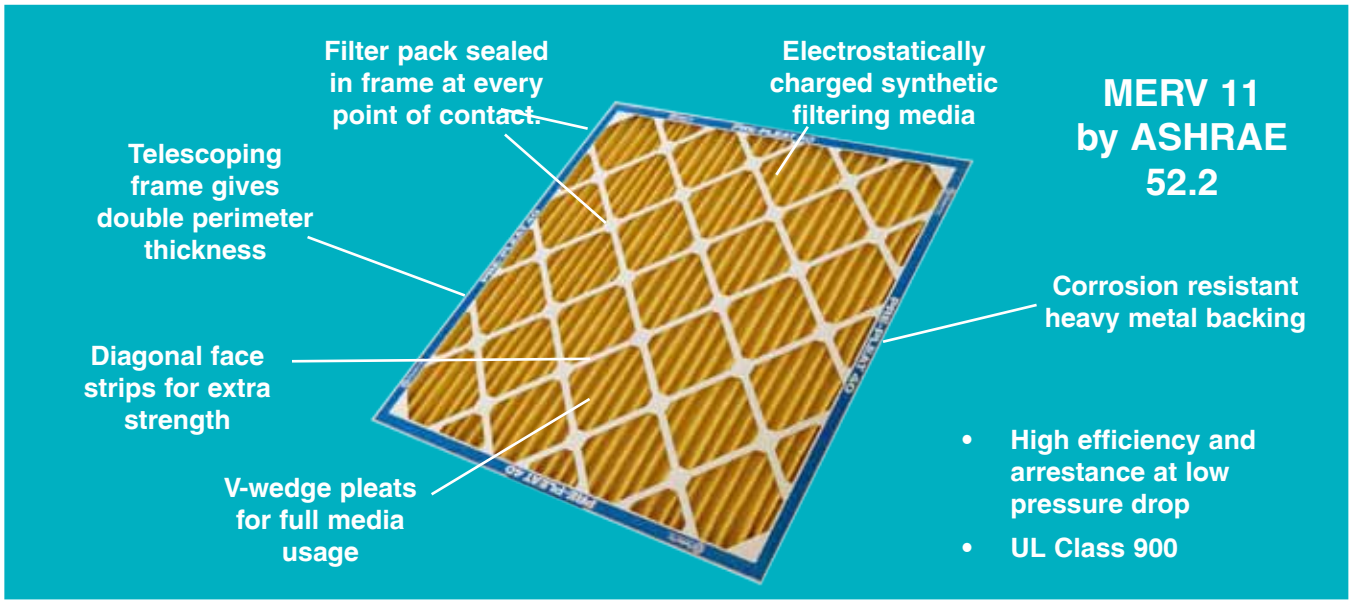
- Upgrade existing rooftop and secular systems by up to 300% in efficiency to remove incoming contaminants not previously removed.
- Upgrade existing prefilter plenums with the 62RM11 Pleat to increase the life of your more expensive final filters downstream.
- Building owners and occupants will be significantly better protected from a bioaerosol hazard than with conventional filters.
- Available by special ordering in High-Velocity design. Contact Factory for pricing
- MERV 11

| Depth | Nominal Size WxHxD (in) | Standard Capacity | | | | | | High Capacity | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 300 FPM | | 500 FPM | | Area | Each | 300 FPM | | 625 FPM | | Area | Each |
| | | cfm | PD | cfm | PD | (sq. ft.) | (lbs) | cfm | PD | cfm | PD | (sq. ft.) | (lbs) |
| 1" | 10 x 10 x 1 | 208 | 0.16 | 347 | 0.39 | 1.1 | 0.2 | 208 | 0.15 | 347 | 0.38 | 1.6 | 0.2 |
| | 10 x 20 x 1 | 417 | 0.16 | 694 | 0.39 | 2.1 | 0.3 | 417 | 0.15 | 694 | 0.38 | 3.0 | 0.4 |
| | 12 x 20 x 1 | 500 | 0.16 | 833 | 0.39 | 2.6 | 0.4 | 500 | 0.15 | 833 | 0.38 | 3.6 | 0.5 |
| | 12 x 24 x 1 | 600 | 0.16 | 1000 | 0.39 | 2.9 | 0.5 | 600 | 0.15 | 1000 | 0.38 | 4.3 | 0.6 |
| | 14 x 20 x 1 | 583 | 0.16 | 972 | 0.39 | 2.9 | 0.5 | 583 | 0.15 | 972 | 0.38 | 4.2 | 0.6 |
| | 14 x 25 x 1 | 729 | 0.16 | 1215 | 0.39 | 3.6 | 0.6 | 729 | 0.15 | 1215 | 0.38 | 5.3 | 0.7 |
| | 15 x 20 x 1 | 625 | 0.16 | 1042 | 0.39 | 3.0 | 0.6 | 625 | 0.15 | 1042 | 0.38 | 4.4 | 0.7 |
| | 16 x 20 x 1 | 667 | 0.16 | 1110 | 0.39 | 3.3 | 0.6 | 667 | 0.15 | 1110 | 0.38 | 4.9 | 0.7 |
| | 16 x 25 x 1 | 834 | 0.16 | 1390 | 0.39 | 4.1 | 0.7 | 834 | 0.15 | 1390 | 0.38 | 6.1 | 0.8 |
| | 18 x 24 x 1 | 900 | 0.16 | 1500 | 0.39 | 4.5 | 0.7 | 900 | 0.15 | 1500 | 0.38 | 6.8 | 1..0 |
| | 18 x 25 x 1 | 938 | 0.16 | 1562 | 0.39 | 4.7 | 0.7 | 938 | 0.15 | 1562 | 0.38 | 6.5 | 1.0 |
| | 20 x 20 x 1 | 834 | 0.16 | 1390 | 0.39 | 4.2 | 0.7 | 834 | 0.15 | 1390 | 0.38 | 6.7 | 0.8 |
| | 20 x 24 x 1 | 1000 | 0.16 | 1667 | 0.39 | 5.1 | 0.8 | 1000 | 0.15 | 1667 | 0.38 | 5.4 | 1.0 |
| | 20 x 25 x 1 | 1042 | 0.16 | 1735 | 0.39 | 5.3 | 0.8 | 1042 | 0.15 | 1735 | 0.38 | 7.3 | 1.0 |
| | 24 x 24 x 1 | 1200 | 0.16 | 2000 | 0.39 | 5.9 | 0.9 | 1200 | 0.15 | 2000 | 0.38 | 7.6 | 1.1 |
| | 25 x 25 x 1 | 1303 | 0.16 | 2170 | 0.39 | 6.6 | 1.0 | 1303 | 0.15 | 2170 | 0.39 | 8.9 | 1.1 |
| 2" | 10 x 20 x 2 | 417 | 0.14 | 694 | 0.30 | 4.1 | 0.6 | 417 | 0.13 | 694 | 0.29 | 6.2 | 0.8 |
| | 12 x 20 x 2 | 500 | 0.14 | 833 | 0.30 | 5.1 | 0.7 | 500 | 0.13 | 833 | 0.29 | 7.2 | 0.9 |
| | 12 x 24 x 2 | 600 | 0.14 | 1000 | 0.30 | 5.5 | 0.8 | 600 | 0.13 | 1000 | 0.29 | 8.6 | 1.0 |
| | 14 x 20 x 2 | 583 | 0.14 | 972 | 0.30 | 5.5 | 0.8 | 583 | 0.13 | 972 | 0.29 | 8.7 | 1.0 |
| | 14 x 25 x 2 | 729 | 0.14 | 1215 | 0.30 | 5.7 | 1.0 | 729 | 0.13 | 1215 | 0.29 | 11.0 | 1.2 |
| | 15 x 20 x 2 | 625 | 0.14 | 1042 | 0.30 | 7.1 | 0.8 | 625 | 0.13 | 1042 | 0.29 | 9.3 | 1.0 |
| | 16 x 20 x 2 | 667 | 0.14 | 1110 | 0.30 | 6.2 | 0.9 | 667 | 0.13 | 1110 | 0.29 | 9.8 | 1.1 |
| | 16 x 25 x 2 | 834 | 0.14 | 1390 | 0.30 | 6.7 | 1.1 | 834 | 0.13 | 1390 | 0.29 | 12.3 | 1.3 |
| | 18 x 24 x 2 | 900 | 0.14 | 1500 | 0.30 | 8.4 | 1.2 | 900 | 0.13 | 1500 | 0.29 | 13.6 | 1.5 |
| | 20 x 20 x 2 | 834 | 0.14 | 1390 | 0.30 | 8.6 | 1.1 | 834 | 0.13 | 1390 | 0.29 | 12.3 | 1.3 |
| | 20 x 24 x 2 | 1000 | 0.14 | 1667 | 0.30 | 8.2 | 1.3 | 1000 | 0.13 | 1667 | 0.29 | 14.8 | 1.6 |
| | 20 x 25 x 2 | 1042 | 0.14 | 1735 | 0.30 | 10. | 1.3 | 1042 | 0.13 | 1735 | 0.29 | 15.5 | 1.6 |
| | 24 x 24 x 2 | 1200 | 0.14 | 2000 | 0.30 | 12.0 | 1.5 | 1200 | 0.13 | 2000 | 0.29 | 17.6 | 1.8 |
| | 25 x 25 x 2 | 1300 | 0.14 | 2170 | 0.30 | 12.7 | 1.6 | 1300 | 0.13 | 2170 | 0.29 | 19.0 | 1.9 |
| 4" | 12 x 24 x 4 | 600 | 0.12 | 1000 | 0.25 | 10.2 | 1.5 | 600 | 0.10 | 1000 | 0.24 | 16.5 | 1.7 |
| | 16 x 20 x 4 | 667 | 0.12 | 1110 | 0.25 | 13.7 | 1.7 | 667 | 0.10 | 1110 | 0.24 | 18.0 | 1.8 |
| | 16 x 25 x 4 | 834 | 0.12 | 1390 | 0.25 | 17.2 | 2.0 | 834 | 0.10 | 1390 | 0.24 | 22.6 | 2.2 |
| | 18 x 24 x 4 | 900 | 0.12 | 1500 | 0.25 | 16.5 | 2.1 | 900 | 0.10 | 1500 | 0.24 | 24.2 | 2.3 |
| | 20 x 20 x 4 | 834 | 0.12 | 1390 | 0.25 | 16.9 | 2.0 | 834 | 0.10 | 1390 | 0.24 | 22.3 | 2.2 |
| | 20 x 24 x 4 | 1000 | 0.12 | 1667 | 0.25 | 17.6 | 2.3 | 1000 | 0.10 | 1667 | 0.24 | 24.0 | 2.5 |
| | 20 x 25 x 4 | 1042 | 0.12 | 1735 | 0.25 | 21.2 | 2.3 | 1042 | 0.10 | 1735 | 0.24 | 27.7 | 2.5 |
| | 24 x 24 x 4 | 1200 | 0.12 | 2000 | 0.25 | 22.5 | 2.5 | 1200 | 0.10 | 2000 | 0.24 | 28.8 | 3.0 |
| | 25 x 29 x 4 | 1500 | 0.12 | 2515 | 0.25 | 30.4 | 3.1 | 1500 | 0.10 | 2515 | 0.24 | 38.4 | 3.6 |
| | 28 x 30 x 4 | 1680 | 0.12 | 2915 | 0.25 | 31.2 | 3.5 | 1680 | 0.10 | 2915 | 0.24 | 42.6 | 4.2 |



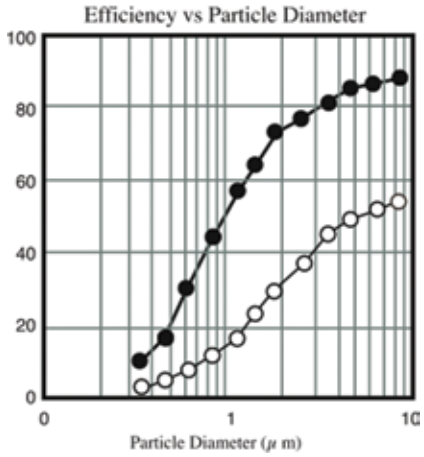
Notes:

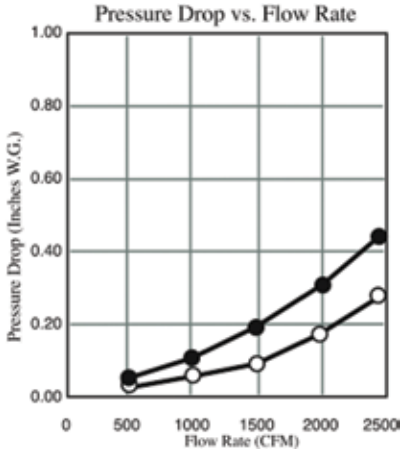
1. PD represents clean pressure drop in inches w.g. The recommended final pressure drop for all models is 1.0 in. w.g. System design may dictate a lower change-out point.
2. Actual filter face size for 12 x 24 and 24 x 24 filters is 5/8 in. under on height and width. Actual face size on all other sizes is 1/2 in. under on height and width.
3. Actual filter depth is 1/4 in. under for these nominal 1 in., 2 in. and 4 in. deep filters.
4. For capacities other than those shown, ratio the face velocities.
5. Performance tolerances conform to Section 7.4 of ARI Standard 850.
6. Performance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.




**Pre Pleat 62RM11**

**Pre Pleat 40 LPD**






## Guide Specifications

***1.0 General***

1.1 Air filters shall be Model Pre Pleat 62RM11 panel filters, as manufactured by Flanders.

***2.0 Filter Construction***

2.1 Each filter shall consist of an electrostatically charged synthetic only media, with corrosion-resistant expanded metal backing and moisture resistant enclosing frame. The filter shall be 1", 2" or 4" nominal depth. The grid shall be 100% bonded to the media on the air exiting side to eliminate media vibration and pull away.

2.2 The grid shall be formed to provide a uniform V-wedge shaped pleat with the open area on the air exiting side for maximum utilization of the media and low airflow resistance. The filter shall be classified for flammability by Underwriters Laboratories, UL Class 900.

***3.0 Performance***

3.1 The filter shall have a Minimum Efficiency Reporting Value of 11 by ASHRAE Standard 52.2.

Flanders®
FOREMOST IN AIR FILTRATION

# Pre Pleat® M13

***LEED® Compliant***

***MERV 13 Pleated Filter***

Model # 90013

***Bulletin: PB713-1210***

## General

Flanders has led the world in filter media development and the application of high efficiency filtration for over 60-years. Pre Pleat™ M13 pleated panel filters can be an ideal choice to achieve the compliance requirements of LEED® V3 IEQ Credits 1.5 and 1.5. The low initial resistance of the M13 can also contribute an overall strategy of reducing energy consumption. Its one, two and four inch depths makes MERV 13 upgrades as trouble-free as a direct replacement for most commercial and industrial applications.

The Pre Pleat M13 provides an initial efficiency of MERV 13 per ASHRAE 52.2-2007 (80-85%) at a resistance of only .20" w.g. when operating at approach velocity of 375 FPM - only 0.30 at 500 FPM. These resistances are well within the operating range of standard MERV 6 - 8 pleated filters!

## Installation Considerations

Distinctions can be made in air filter technology. Flanders is committed to continuously developing new and improved products to assist in an environmentally responsible, healthy, and prosperous environment.

The Pre Pleat M13 high capacity pleated panel filters are suitable as pre filters but are best suited for heavy duty commercial, industrial, and pharmaceutical applications where high dust holding is required. The Pre Pleat M13 can be installed in PF-1 Holding Frames, K-Trac Framing Modules, Surepleat Side Access Housings and Bag-In / Bag-Out Containment housings.

## Operating Temperature Limits

Maximum operating temperature is 180°F (82.22°C).

## Physical Data

**Media:** 100% Non-woven synthetic media manufactured from recyclable material

**Media Support:** Diamond-shaped expanded metal

**Pleat Design:** V-Pleat

**Pleat Count:**
1"= 9, 2"= 9, 4"=15

**Frame:** Moisture-resistant clay coated frame made with recyclable material

## Important Features

- Complies with the Air Filter requirements of Credits 1.4 and 1.5 under LEED® IEQ Version 3
- Contributes to satisfying the following LEED® Version 3 Credits:
  - Energy & Atmosphere: Credit 1.0
  - Materials & Resources: Credit 1.0
  - Indoor Environmental Quality: Credits 1.1 and 3.2
  - Innovation: Credit: 1.0

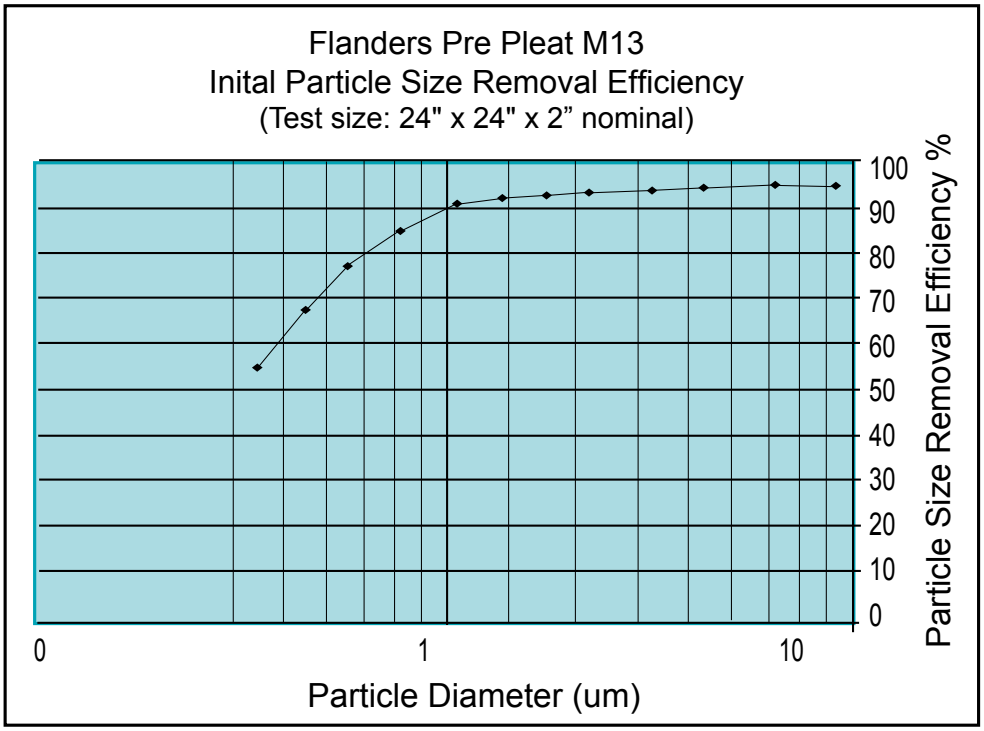
# Capacities and Dimensions

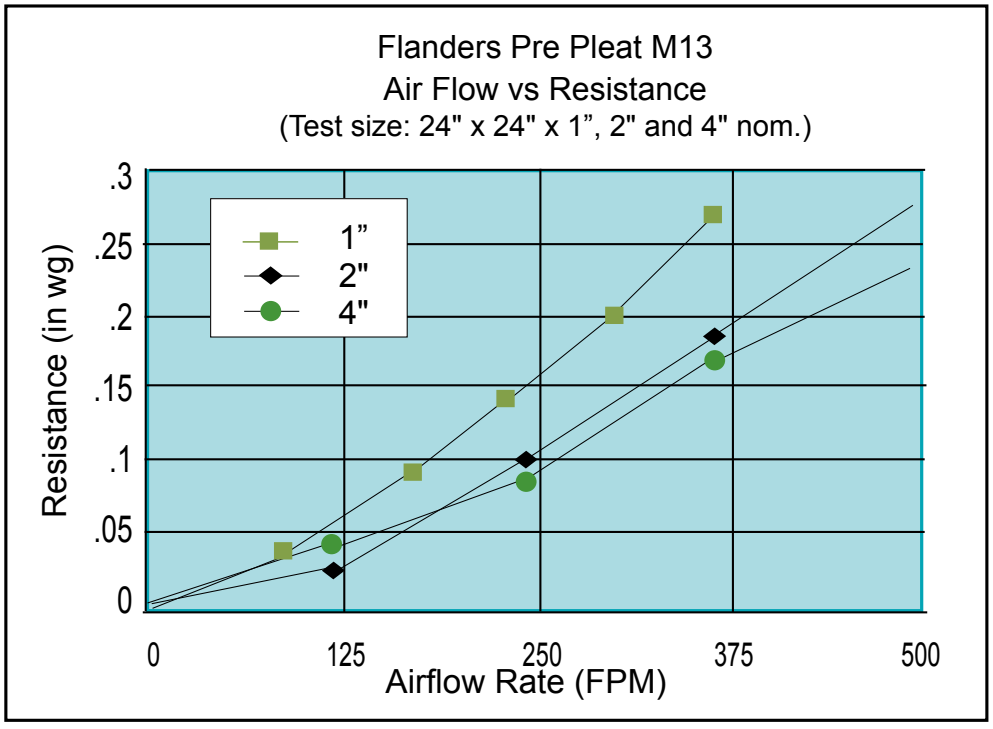
| Nominal Depth (in.) | Nominal Size WxHxD (in.) | Standard Capacity | | | | Media Area (sq. ft.) | Wt. Each (lbs.) |
|---|---|---|---|---|---|---|---|
| | | 300 FPM | | 500 FPM | | | |
| | | CFM | PD | CFM | PD | | |
| 1” Standard Capacity 15 ppf | 10x20x1 | 417 | 0.25 | 694 | - | 2.7 | 0.3 |
| | 12x20x1 | 500 | 0.25 | 833 | - | 3.1 | 0.3 |
| | 12x24x1 | 600 | 0.25 | 1000 | - | 3.7 | 0.4 |
| | 14x20x1 | 583 | 0.25 | 972 | - | 3.7 | 0.4 |
| | 14x25x1 | 729 | 0.25 | 1215 | - | 4.6 | 0.5 |
| | 15x20x1 | 625 | 0.25 | 1042 | - | 3.9 | 0.4 |
| | 16x20x1 | 667 | 0.25 | 1111 | - | 4.1 | 0.4 |
| | 16x24x1 | 800 | 0.25 | 1333 | - | 4.9 | 0.5 |
| | 16x25x1 | 833 | 0.25 | 1389 | - | 5.2 | 0.5 |
| | 18x20x1 | 750 | 0.25 | 1250 | - | 4.7 | 0.5 |
| | 18x24x1 | 900 | 0.25 | 1500 | - | 5.7 | 0.6 |
| | 18x25x1 | 938 | 0.25 | 1563 | - | 5.9 | 0.6 |
| | 20x20x1 | 833 | 0.25 | 1389 | - | 5.1 | 0.5 |
| | 20x24x1 | 1000 | 0.25 | 1667 | - | 6.2 | 0.6 |
| | 20x25x1 | 1042 | 0.25 | 1736 | - | 6.4 | 0.6 |
| | 24x24x1 | 1200 | 0.25 | 2000 | - | 7.4 | 0.7 |
| | 25x25x1 | 1302 | 0.25 | 2170 | - | 8.3 | 0.8 |
| 2” Standard Capacity 15 ppf | 10x20x2 | 417 | 0.15 | 694 | 0.30 | 6.1 | 0.6 |
| | 12x20x2 | 500 | 0.15 | 833 | 0.30 | 7.3 | 0.7 |
| | 12x24x2 | 600 | 0.15 | 1000 | 0.30 | 8.8 | 0.8 |
| | 14x20x2 | 583 | 0.15 | 972 | 0.30 | 8.5 | 0.8 |
| | 14x25x2 | 729 | 0.15 | 1215 | 0.30 | 10.6 | 1.0 |
| | 15x20x2 | 625 | 0.15 | 1042 | 0.30 | 9.1 | 0.8 |
| | 16x20x2 | 667 | 0.15 | 1110 | 0.30 | 9.7 | 0.9 |
| | 16x24x2 | 800 | 0.15 | 1335 | 0.30 | 11.2 | 1.0 |
| | 16x25x2 | 833 | 0.15 | 1390 | 0.30 | 12.2 | 1.1 |
| | 18x20x2 | 750 | 0.15 | 1250 | 0.30 | 10.9 | 1.2 |
| | 18x24x2 | 900 | 0.15 | 1500 | 0.30 | 13.1 | 1.3 |
| | 18x25x2 | 938 | 0.15 | 1563 | 0.30 | 13.7 | 1.1 |
| | 20x20x2 | 833 | 0.15 | 1390 | 0.30 | 12.2 | 1.3 |
| | 20x24x2 | 1000 | 0.15 | 1667 | 0.30 | 14.6 | 1.3 |
| | 20x25x2 | 1042 | 0.15 | 1735 | 0.30 | 15.2 | 1.5 |
| | 24x24x2 | 1200 | 0.15 | 2000 | 0.30 | 17.5 | 1.6 |
| | 25x25x2 | 1302 | 0.15 | 2170 | 0.30 | 19.0 | 1.6 |
| 4” Standard Capacity 9 ppf | 12x24x4 | 600 | 0.13 | 1000 | 0.23 | 11.3 | .09 |
| | 16x20x4 | 667 | 0.13 | 1110 | 0.23 | 12.5 | 1.0 |
| | 16x25x4 | 833 | 0.13 | 1390 | 0.23 | 15.6 | 1.3 |
| | 18x24x4 | 900 | 0.13 | 1500 | 0.23 | 17.5 | 1.4 |
| | 20x20x4 | 833 | 0.13 | 1390 | 0.23 | 15.6 | 1.3 |
| | 20x24x4 | 1000 | 0.13 | 1667 | 0.23 | 18.8 | 1.5 |
| | 20x25x4 | 1042 | 0.13 | 1735 | 0.23 | 19.6 | 1.6 |
| | 24x24x4 | 1200 | 0.13 | 2000 | 0.23 | 22.6 | 1.8 |
| | 28x30x4 | 1750 | 0.13 | 2915 | 0.23 | 32.6 | 2.8 |

**Notes:**

1. PD represents clean pressure drop in inches w.g. The recommended final pressure drop for all models is 1.0 in. w.g. System design may dictate a lower change-out point.
2. Actual filter face size for 12x24 and 24x24 filters is 5/8 inch under on height and width. Actual face size on all other sizes is 1/2 inch under on height and width.
3. Actual filter depth is 1/4 inch under for these nominal 1-inch, 2-inch and 4-inch deep filters. For capacities other than those shown, ratio the face velocities.
4. Efficiency is not affected by the conditioning steps outlined in ASHRAE 52.2-2007 per Appendix J.

## Dust Loading / Resistance Curve




**Notes:**

1. The Pre Pleat M13 maintains efficiency values during conditioning tests.
2. All data per ASHRAE 52.2, latest revision. Independent test reports are available upon request.

# Pre Pleat® HV

***MERV 8 High Velocity & Gas Turbine Pleat***

Model # 85455

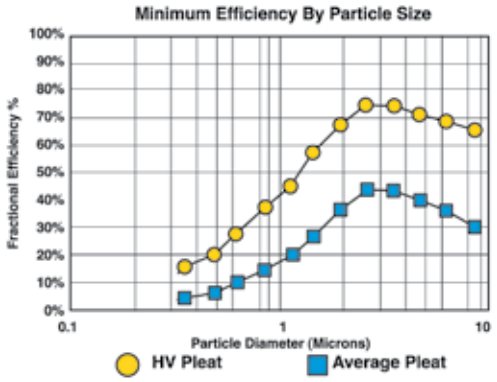
***Bulletin: PB703-0308***

## General

The Pre Pleat HV pleated filter from Flanders is designed to operate in high velocity and turbulent air applications where standard pleated filters have a tendency to fail.

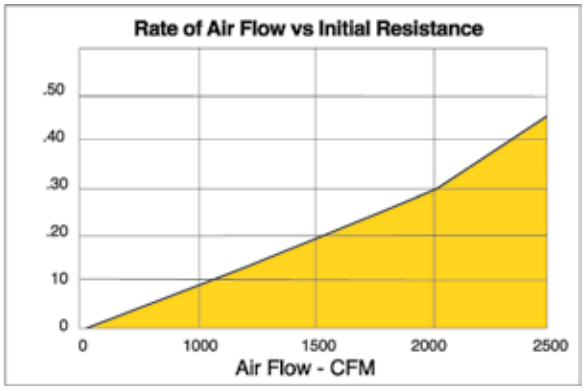
They are ideal for gas turbine and rotary machinery equipment or any area requiring a pleated filter to operate under demanding use.

PrePleat HV filters are offered in the most popular face sizes in 2” and 4” depths.




## Construction

A heavy-duty, die-cut, clay coated frame encloses the media pack. A 100% hydrophic synthetic media is bonded to a corrosion-resistant, 1-1/4 in. mesh expanded metal backing which is substantially heavier than standard metal backing. These features result in a more efficient, durable and reliable product.




## Important Features

- Moisture resistant die-cut frame
- Heavy gauge metal backing for exceptional strength
- 1 in., 2 in., 4 in. depths
- Special sizes available
- MERV 8 rating, per ASHRAE Standard 52.2




Pleated Air Filters

| Nominal Size W x H x D (in.) | 300 fpm | | 500 fpm | | Media Area sq. ft. |
|---|---|---|---|---|---|
| | cfm | PD | cfm | PD | |
| 10 x 20 x 2 | 417 | 0.13 | 694 | 0.29 | 6.2 |
| 12 x 20 x 2 | 500 | 0.13 | 833 | 0.29 | 7.2 |
| 12 x 24 x 2 | 600 | 0.13 | 1000 | 0.29 | 8.6 |
| 14 x 20 x 2 | 583 | 0.13 | 972 | 0.29 | 8.7 |
| 14 x 25 x 2 | 729 | 0.13 | 1215 | 0.29 | 11.0 |
| 15 x 20 x 2 | 625 | 0.13 | 1042 | 0.29 | 9.3 |
| 16 x 20 x 2 | 667 | 0.13 | 1110 | 0.29 | 9.8 |
| 16 x 25 x 2 | 834 | 0.13 | 1390 | 0.29 | 12.3 |
| 18 x 24 x 2 | 900 | 0.13 | 1500 | 0.29 | 13.6 |
| 18 x 25 x 2 | 938 | 0.13 | 1563 | 0.29 | 14.2 |
| 20 x 20 x 2 | 834 | 0.13 | 1390 | 0.29 | 12.3 |
| 20 x 24 x 2 | 1000 | 0.13 | 1667 | 0.29 | 14.8 |
| 20 x 25 x 2 | 1042 | 0.13 | 1735 | 0.29 | 15.5 |
| 24 x 24 x 2 | 1200 | 0.13 | 2000 | 0.29 | 17.6 |
| 25 x 25 x 2 | 1300 | 0.13 | 2170 | 0.29 | 19.0 |

| Nominal Size W x H x D (in.) | 300 fpm | | 500 fpm | | Media Area sq. ft. |
|---|---|---|---|---|---|
| | cfm | PD | cfm | PD | |
| 12 x 24 x 4 | 600 | 0.10 | 1250 | 0.35 | 16.5 |
| 16 x 20 x 4 | 667 | 0.10 | 1390 | 0.35 | 18.0 |
| 16 x 25 x 4 | 834 | 0.10 | 1735 | 0.35 | 22.6 |
| 18 x 24 x 4 | 900 | 0.10 | 1500 | 0.35 | 24.2 |
| 20 x 20 x 4 | 834 | 0.10 | 1735 | 0.35 | 22.3 |
| 20 x 24 x 4 | 1000 | 0.10 | 1667 | 0.35 | 24.0 |
| 20 x 25 x 4 | 1042 | 0.10 | 2170 | 0.35 | 27.7 |
| 24 x 24 x 4 | 1200 | 0.10 | 2500 | 0.35 | 28.8 |
| 25 x 29 x 4 | 1500 | 0.10 | 3100 | 0.35 | 38.4 |
| 28 X 30 X 4 | 1680 | 0.10 | 3500 | 0.35 | 42.6 |

Performance values shown in this publication may be averages or estimates intended to generally represent product styles. Contact factory for latest test data on specific Flanders models.

## Guide Specifications

***1.0 General***

1.1 High velocity Pre Pleat HV extended surface pleated filter shall be manufactured by Flanders.

1.2 Filter sizes and capacities shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filter media shall be manufactured of 100% electrostatically charged synthetic fibers and bonded to a corrosion resistant expanded metal backing.

2.2 The frame shall be moisture resistant board with diagonal and horizontal support members on the upstream and downstream sides

***3.0 Performance***

3.1 Initial and final resistance shall not exceed the scheduled values.

3.2 Media area must be equal to that of the specified filter.

3.3 The minimum efficiency shall be a MERV 8 rating per ASHRAE Standard 52.2 and 30-35% dust spot efficiency per ASHRAE Standard 52.1.

3.4 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# Pre Pleat® Class 1

***UL 900 Class 1 Pleated Filter***

Model # 85855 (Standard) & 85955 (High)

***Bulletin: PB705-0612***

## General

This pleated air filter is designed for applications where a UL Class 1 fire rated filter is required and metal frame filters are unsuitable because of disposal problems. The Pre Pleat Class 1 pleated air filter has been tested by Underwriters Laboratories, Incorporated and found to meet the stringent performance characteristics of a Class 1 air filter for flammability, as outlined in Standard 900. Class 1 air filter units are described as "Those that, when clean, do not contribute fuel when attacked by flame and emit only negligible amounts of smoke."

## Construction

The filter consists of a nominal 50% dust spot efficiency micro-fine fiberglass filtration media that has been bonded to a corrosion-resistant expanded metal backing, and then pleated into either standard or high capacity packs. Each pack is encased and sealed within a die-cut frame which is manufactured of special mineral-filled board to resist flammability.

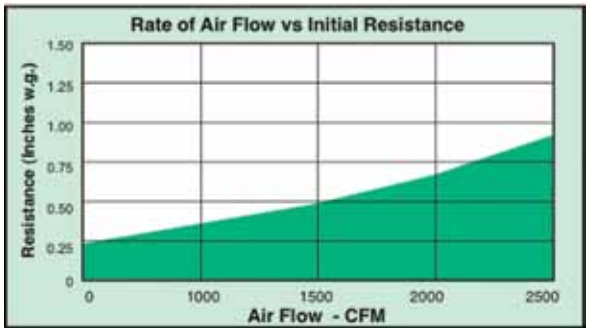
Pre Pleat Class 1 pleated air filters are offered in two inch depth in all of the most popular face sizes.

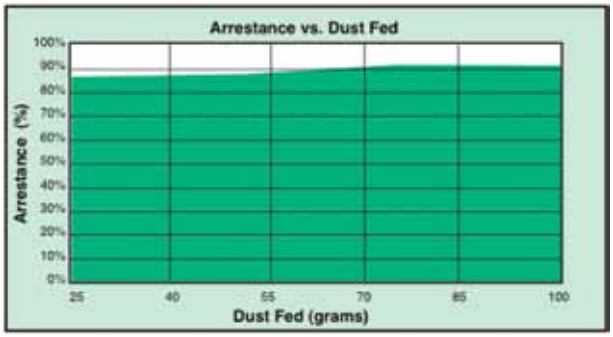
| | cfm @300 fpm | cfm @ 500 fpm | St. Cap. Resistance @ 300 fpm | Std. Cap. Resistance @ 500 fpm | High Cap. Resistance @ 300 fpm | High Cap. Resistance @ 500 fpm |
|---|---|---|---|---|---|---|
| 12x24x2 | 600 | 1000 | .36 | .64 | .30 | .50 |
| 16x20x2 | 667 | 1111 | .36 | .64 | .30 | .50 |
| 16x25x2 | 833 | 1389 | .36 | .64 | .30 | .50 |
| 20x20x2 | 833 | 1329 | .36 | .64 | .30 | .50 |
| 20x24x2 | 1000 | 1667 | .36 | .64 | .30 | .50 |
| 20x25x2 | 1041 | 1736 | .36 | .64 | .30 | .50 |
| 24x24x2 | 1200 | 2000 | .36 | .64 | .30 | .50 |

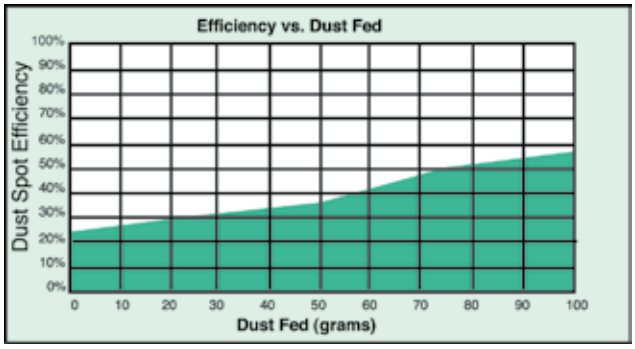


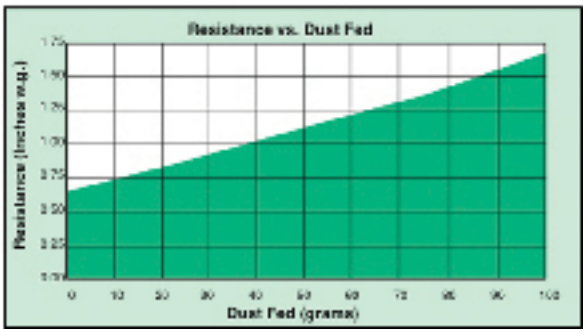
## Important Features

- UL 900 Class 1 for flammability
- Easily disposable
- Offered in all standard face sizes, 2” depth
- High lofted glass pleated media
- Nominal 50% ASHRAE efficiency
- MERV 8




Performance values stated may be averages typical of the products listed.
Contact factory for actual performance test reports on specific products.

## Guide Specifications

***1.0 General***

1.1 Medium efficiency UL Class 1 fire rated pleated filters shall be Pre Pleat Class 1 as manufactured by Flanders.

1.2 Filter sizes and capacities shall be scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filter media shall be manufactured of a high lofted micro-fine media with a minimum efficiency of 50% per ASHRAE Standard 52.1

2.2 A corrosion-resistant expanded metal wire grid shall be bonded to the media to maintain pleat integrity.

2.3 The die-cut frame shall be flame-resistant, mineral-filled board to meet a UL Class 1 fire rating.

***3.0 Performance***

3.1 Initial and final resistance shall not exceed the final values.

3.2 Media must meet or exceed the ratings that of the specified filter.

3.3 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# Pre Pleat® HT

## *High Temperature Pleated Filters*

Model # 84555 (Standard) & 84655 (High)

***Bulletin: PB706-0612***

## General

Flanders Pre Pleat HT filters are designed for increased air filtration efficiencies in an operating environment where temperatures reach up to 400˚ F. Typical examples include air intakes for drying ovens or high temperature baking applications.

## Construction

The Pre Pleat HT high temperature pleated air filter consists of a nominal 50% dust spot efficiency micro-fine fiberglass filtration media that has been bonded to corrosion-resistant expanded metal backing, then pleated into either standard or high capacity packs.

Each pack is encased within a 24 gage corrosion-resistant metal frame with an expanded corrosion-resistant metal face screen on the downstream side to increase pack rigidity while preventing blowouts.

Flanders Pre Pleat HT pleated air filters are offered in two inch depths in all of the most popular face sizes.They have been tested by Underwriters Laboratories, Incorporated and found to meet the stringent performance characteristics of a Class 1 air filter for flammability as outlined in Standard 900.

## Physical Data

Frame: 24 gauge corrosion-resistant steel

Media: 50% Efficient micro-fine fiberglass

Pleat Design: V-wedge Pleat

Face Screen: Expanded metal corrosion-resistant steel

| | cfm @300 fpm | cfm @ 500 fpm | St. Cap. Resistance @ 300 fpm | Std. Cap. Resistance @ 500 fpm | High Cap. Resistance @ 300 fpm | High Cap. Resistance @ 500 fpm |
|---|---|---|---|---|---|---|
| 12x24x2 | 600 | 1000 | .36 | .64 | .30 | .50 |
| 16x20x2 | 667 | 1111 | .36 | .64 | .30 | .50 |
| 16x25x2 | 833 | 1389 | .36 | .64 | .30 | .50 |
| 20x20x2 | 833 | 1329 | .36 | .64 | .30 | .50 |
| 20x24x2 | 1000 | 1667 | .36 | .64 | .30 | .50 |
| 20x25x2 | 1041 | 1736 | .36 | .64 | .30 | .50 |
| 24x24x2 | 1200 | 2000 | .36 | .64 | .30 | .50 |

Performance values stated may be averages typical of the products listed.
Contact factory for actual performance test reports on specific products.

## Guide Specifications

***1.0 General***

1.1 High Temperature pleated filters shall be Pre Pleat HT as manufactured by Flanders.

1.2 Filter sizes and capacities shall be scheduled on the drawings.

1.3 Filters shall be UL Class 1 listed and be able to operate up to 400 degrees Fahrenheit.

***2.0 Filter Construction***

2.1 Filter media shall be manufactured of a high lofted micro-fine media with a minimum efficiency of 50% per ASHRAE Standard 52.1

2.2 An expanded metal wire grid shall be bonded to the media to maintain pleat integrity.

2.3 The filter pack shall be enclosed within a corrosion-resistant frame and furnished with an expanded metal facescreen on the downstream, air leaving side.

***3.0 Performance***

3.1 Initial and final resistance shall not exceed the final values.

3.2 Media efficiency and content must meet or exceed the ratings of the specified filter.

3.3 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# Residential Air Cleaner Refills

***For Space Gard® , Air Bear®, Honeywell® Air Cleaners****

***Bulletin: PB800-0810***



## Media for high efficiency air cleaners

Models 450HW, 500AB, 600SG and replacement cartridges for selected air cleaners are made with a blend of polypropylene and polyethylene electrostatic filtration media which is adhered to an expanded metal backing. This combination is deep pleated and encased in a moisture resistant kraft board frame.

Models 550AB and 650SG cartridges are similar to our industrial grade PrecisionCell II air filter, with perfectly spaced mini-pleats of wet laid glass microfiber media and a moisture resistant kraft board frame. This provides high efficiency filtration and a longer filter life and a MERV 10 rating.

Model 650SG media inserts consist of the same media as the 550AB and 650SG cartridges but are provided in a convenient, easy to store package. They are pleated to the proper depth with fastener strips secured to each outside pleat.

## Replacements

***HDR Return Grille Filter***

The HDR (Header) filters are designed for replacement of Honeywell® FC40R Cartridges. They are used in place of existing standard one inch return air grille filters. If your current air return has a minimum inside clearance of 4", then you can upgrade to a higher efficient, longer lasting air filter.

***Air Bear®***

Models 300AB, 500AB and 550AB cartridges are designed for use with the Trion Air Bear® air cleaner housings. Simply install in place of the Trion® cartridge. No alterations or equipment are required.

***Space Gard® / Aprilaire®***

The 650SG replacement inserts are designed for use in Space Gard® / Aprilaire® air cleaner housings by using the existing pleat separators and media holding assembly. There are two sizes available, one for models 2200 and 2250 (201), and one for the model 2400 (401). An easy-to-follow assembly guide is printed on the package back.

Model 600SG and 650SG cartridges are also designed for use in Space Gard® / Aprilaire® models 2200 and 2250 air cleaner housings. Designed to replace the traditional collapsible media pack, Models 600SG and 650SG provide all of the benefits of the original, but with considerably less effort to install.

***Honeywell®***

The Model 450HW cartridges are designed for replacement of Honeywell® models 203719, 203720, 203721 and 203722. They offer the benefit of superior performance and easy installation.

## Important Features

- Equal or superior performance to original replacements
- Replacements for several models
- Electrostatic Poly blend models offer a MERV 8-11 rating
- Mini-pleat models and 650SG Inserts offer a MERV 10 rating

**Air Bear® is a registered trademark of Trion, Incorporated. Reference to their mark is for system identification only.*

**Space Gard® is a registered trademark of Research Products Corporation. Reference to their mark is for system identification only.*

**Honeywell® is a registered trademark of Honeywell Inc. Reference to their mark is for system identification only.*

# Residential Air Cleaner Refills

***Cross-Reference***

***Bulletin: PB3002-0810***

| | *Flanders Model and Part Number* | | *Competitive Model and Part Number* |
|---|---|---|---|
|  *Standard Efficiency Model # 82655 MERV 8* | ***HW 450*** | | |
| | ***MERV 8*** | ***MERV 11*** | ***Honeywell®*** |
| | 82655.0451620<br>15 3/4" x 19 3/4" x 4 1/4" | 82755.0451620<br>15 3/4" x 19 3/4" x 4 1/4" | FC100A1003 - 209894 |
| | 82655.0451625<br>15 3/4" x 24 1/4" x 4 1/4" | 82755.0451625<br>15 3/4" x 24 1/4" x 4 1/4" | FC100A1029 - 203719 |
| | 82655.0452020<br>19 3/4" x 19 3/4" x 4 1/4" | 82755.0452020<br>19 3/4" x 19 3/4" x 4 1/4" | FC100A1052 - 203721 |
| | 82655.0452025<br>19 3/4" x 24 1/4" x 4 1/4" | 82755.0452025<br>19 3/4" x 24 1/4" x 4 1/4" | FC100A1037 - 203720 |
|  *High Efficiency Model # 82755 MERV 11* | ***AB300 & AB500*** | | |
| | ***MERV 8*** | ***MERV 11*** | ***Trion®*** |
| | 82655.031625<br>15 3/4" x 24 1/4" x 3" | 82755.031625<br>15 3/4" x 24 1/4" x 3" | Air Cub® 1200 - 255649-101 /229990-101 |
| | 82655.051625<br>15 3/4" x 24 3/4"x 4 3/4" | 82755.051625<br>15 3/4" x 24 3/4"x 4 3/4" | Air Bear® 1400 - 255649-105 /229990-105 |
| | 82655.052020<br>19 3/4" x 19 3/4"x 4 3/4" | 82755.052020<br>19 3/4" x 19 3/4"x 4 3/4" | Air Bear® 1400 - 255649-103 /229990-103 |
| | 82655.052025<br>19 5/8" x 24 1/8"x 4 3/4" | 82755.052025<br>19 5/8" x 24 1/8"x 4 3/4" | Air Bear® 2000 - 255649-102 /229990-102 |
|  *High Efficiency Model # 82105 - MERV 8* | ***High Efficiency Series w/HDR - MERV 8*** | | ***Honeywell®*** |
| | 82105.051620 - 15 1/2" x 19 1/2"x 4 1/2" | | FC40R1052 |
| | 82105.051625 - 15 1/2" x 24 1/2"x 4 1/2" | | FC40R1060 |
| | 82105.052020 - 19 1/2" x 19 1/2"x 4 1/2" | | FC40R1003 |
| | 82105.052025 - 19 1/2" x 24 1/2"x 4 1/2" | | FC40R1011 |
|  *High Efficiency MERV 10* | ***SG65 - MERV 10*** | | ***Aprilaire® / Research Products®*** |
| | 82455.062025 *(media only)* | | Model 2200, 2250 Replacement Insert Type 201 |
| | 82655.062025 | | Model 2200, 2250 Replacement Cartridge Type 201 |
| | 82455.061627 *(media only)* | | Model 2400 Replacement Refill Type 401 |
| | 82456.061627 *(media only)* | | Model 5000 Replacement Filter Type 501 |

Flanders®
FOREMOST IN AIR FILTRATION

# Model 500AB

## *Air Cleaner Housing*

Model # 82855 (Housing) & 82955 (Cartridge)



### General

The Model 500AB air cleaner housing is designed for use with the Model 500AB or 550AB cartridge in an HVAC system. Both of these cartridges feature deep pleated media whose area is several times the face area of the housing.

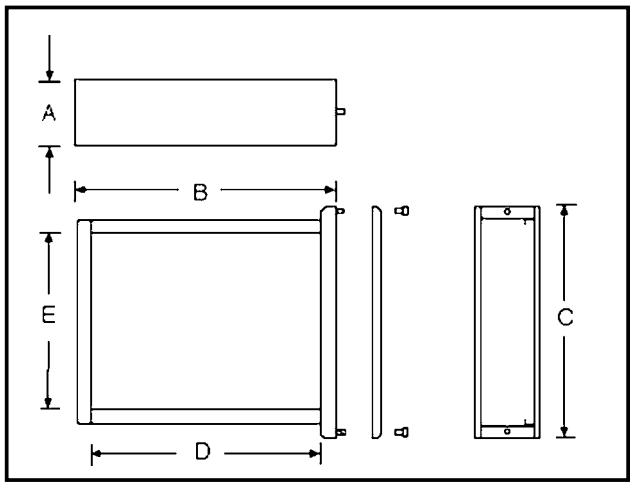
With the advent of modern air tight buildings, many of us spend our indoor hours in air that can literally make us feel sick with the recirculation of dirt, dust pollen, animal dander, and other particulates. It is for this reason that state-of-the-art air filtration is essential. Flanders Model 500AB air cleaners offer a solution you can trust, backed by nearly 50 years of filtration manufacturing experience.

The non-woven media inserts capture a wide range of airborne particles as small as 1 micron (1/25,000 of an inch in diameter). These airborne particles include grease and soot (5 microns), dust (10 microns), pollen and mold (100 microns) which are commonly found in homes. This type of filtration not only provides cleaner air but keeps these particles from building up on cooling and heating equipment.

### Construction

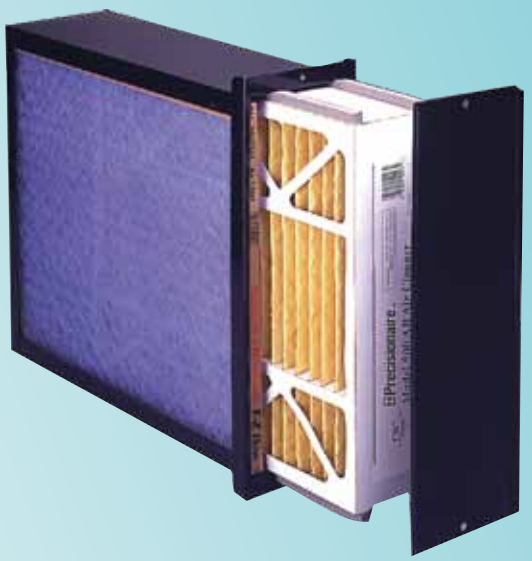
The Model 500AB air cleaner housing has a built-in prefilter track. Using a prefilter can greatly increase the useful life of a high efficiency filter such as the 500AB or 550AB cartridges. The Model 500AB air cleaner housing takes a standard 20 x 25 x 1 inch disposable panel filter as a prefilter.

### Dimensions




### Important Features

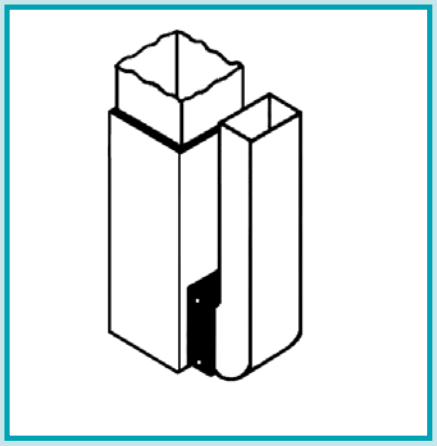
- Allows better filtration and less maintenance
- Rugged metal construction
- Prefilter track for particulate or gas/vapor control
- Easy and affordable way to upgrade residential filtration

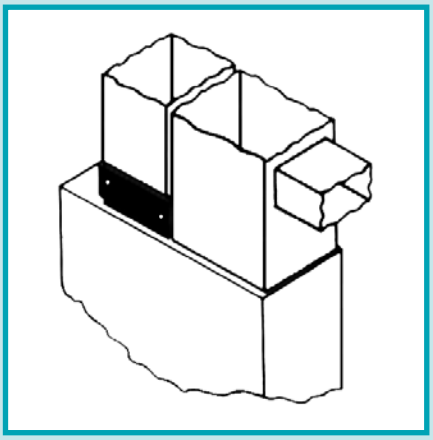


## Versatile Installation

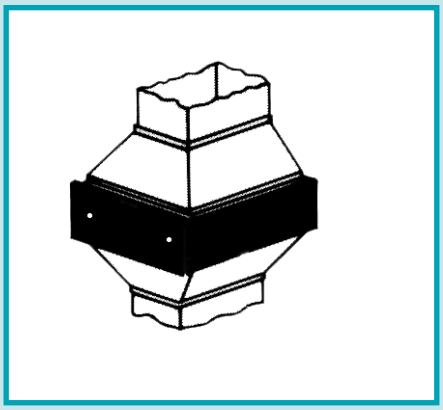
The Model 500AB air cleaner housing can be installed in a variety of configurations; Highboy, Lowboy, Horizontal, Upflow or Vertical Downflow.

HIGHBOY

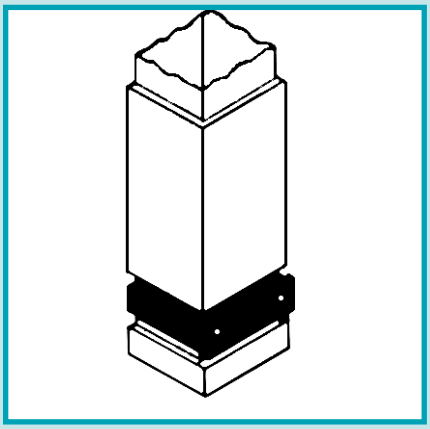




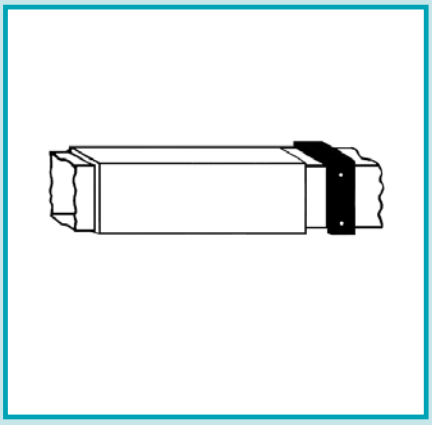
LOWBOY



TYPICAL TRANSITION (VERTICAL DOWNFLOW)



UPFLOW



HORIZONTAL

# Super Flow® PC

**Extended Media Separatorless Type Rigid Filter**

**TOCM Level 5 Product**

Model # 82855 (Housing) & 82955 (Cartridge)

***Bulletin: PB1009-0512***

## General

Flanders Research and Development has again raised the bar in ASHRAE innovations with the release of the new Super-Flow PC product. The Super-Flow PC extended media separatorless type rigid filters are designed for use in most commercial or industrial HVAC systems where medium to high efficiency filtration is required. The Super-Flow PC filters supreme dust holding capacity ensures that it lasts longer and is more durable than competitive products. Super-Flow PC filters are available in average efficiency ranges of 60-65%, 80-85%, 90-95%, and 98% per ASHRAE Standard 52.1 test methods and offered as a MERV 11-A to 16-A according to ASHRAE Std. 52.2-2007, Appendix J.

Three styles are available: box, single and double-header in a 24 ga. corrosion-resistant steel frame. Super-Flow PC filters are constructed and designed to be UL Class 900 listed.

## Low Pressure Drop

Super-Flow PC filters may be installed in Flanders PF-1 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings, or in similar existing hardware.

PF-1 are riveted together to form a bank and may be installed for upstream or downstream service. K-Trac Filter Framing Modules are especially suitable for medium to large built-up filter banks. Smaller systems and systems with minimum upstream access space are best served using Sureseal Side Access Housings.

## Application Guidelines

Super-Flow PC filters may be used wherever job requirements dictate totally rigid filters and available space will allow only minimal inline depth.

Super-Flow PC filters should be selected using 24”x24” , 24”x12”, 20”x20” and 20”x24” face sizes. This insures that replacement cartridges will be readily available.

Super-Flow PC filters should be installed with filter pleats vertical wherever possible. It is permissible to install 24” x 12” face size cartridges with separators horizontal if necessary to meet the size requirements of the filter bank.

## Prefilters

We recommend Pre Pleat 40 LPD pleated filters are utilized as prefilters for Super-Flow PC applications. Research has shown that the proper pleat selection can extend the life of post filters and also result in improved TOCM ratings. Contact Flanders for more details of the Total Operational Cost Matrix Program and rating system.

## Physical Data

**Frame:** 24 ga. corrosion-resistant steel

**Media:** Moisture-resistant micro-fine fiberglass 100% Separatorless Super-Flow PC Media pack sealed in the frame with Class 1 urethane media manufactured by Flanders.

**Headers:** 13/16“ wide molded plastic

**Limits:** 100% RH and 250° F

**Actual Face:** Nominal size less 5/8”

**Actual Depth**: 5-7/8” or 11-1/2”

## Important Features

- Supreme dust holding capacity ensuring longer life
- Provides the lowest average resistance to airflow
- Absence of metal compounds eliminates rist of corrosion and allows for total incineration
- Plastic frame and no metal separators
- Very light weight with exceptional strenth
- Moisture resistant for humid air applications
- MERV 11A - 15A according to ASHRAE Std. 52.2-2007, Appendix J

Flanders®
FOREMOST IN AIR FILTRATION

# Super Flow® V

***Extended Surface Minipleat Filter***

Model # SFV

***Bulletin: PB1000-0612***

## General

Super-Flow® V extended surface area & low pressure drop minipleat filters are designed for use in most commercial and industrial HVAC systems where medium to high efficiency filtration is required. Super-Flow®V filters are available in average efficiency ranges: 65%, 85%, 95% and 98% per ASHRAE Standard 52.1 test methods and 95% DOP. They may be operated at face velocities from 0 to 750 fpm. Super-Flow® V filters are UL Class 900 listed.

Super-Flow® V filters are constructed of multiple minipleat panels bonded to flame-retardant plastic panels on top and bottom to make an unusually strong assembly that is both corrosion and moisture resistant. Aerodynamic extruded vertical supports minimize air entry turbulence. Super-Flow® V filters are totally rigid making them ideal for variable air volume (VAV) systems, as well as applications downstream of supply fans.

## Low Pressure Drop

Super-Flow®V minipleat filters have an exceptionally low clean pressure drop unmatched by most any filter of the same efficiency. This affords low fan energy costs during much of the life of the filter system. In addition, they are the filters of choice for packaged air conditioning systems that do not have the fan capacity of larger central systems.

Longer service life means material and labor cost savings and less disruption of systems caused by filter change-out shutdowns. High dust holding capacity is a key benefit of a filter with increased media area.

## Physical Data

**Media:** Moisture-resistant microfine fiberglass
**Filter Pack:** Minipleat panels
**Media Support:** Adhesive
**Top and Bottom Panels:** Flame-retardant plastic
**Vertical Supports:** Aerodynamic extruded vertical supports
**Operating Limits:** 160°F and 100% RH continuous duty
**Actual Header Size:** Nominal size less 5/8" (e.g. a nominal 24" x 24" filter is actually 23-3/8" x 23-3/8")
**Actual Depth:** 11-1/2"

## Important Features

- Lowest clean pressure drop for energy savings and applicability to small fan systems
- Longer service life because of a very high ratio of media to nominal face area
- Aerodynamic vertical supports minimize air entry turbulence
- Minipleat panels provide rigidity for VAV systems and resistance to turbulent air flow
- May be operated from 0 to 750 fpm face velocity in either air flow direction
- Moisture resistant for humid air applications
- MERV 11-15

| Efficiency % | Model Number | Nominal Size HxWxD Inches | 250 FPM | | 375 FPM | | 500 FPM | | 625 FPM | | 750 FPM | | Media Area (Sq.Ft) | Wt. Each (Lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | PD | CFM | PD | CFM | PD | CFM | PD | CFM | PD | | |
| 95% DOP | SFV0J-24 00 00 00 | 12 x 24 x 12 | 1000 | 0.28 | 1500 | 0.55 | 2000 | 0.75 | 2500 | 1.0 | * | * | 196 | 18 |
| 95% DOP | SFV0J-04 00 00 00 | 20 x 24 x 12 | 800 | 0.28 | 1200 | 0.55 | 1600 | 0.75 | 2000 | 1.0 | * | * | 162 | 14 |
| 95% DOP | SFV0J-44 00 00 00 | 24 x 24 x 12 | 500 | 0.28 | 750 | 0.55 | 1000 | 0.75 | 1250 | 1.0 | * | * | 98 | 9 |
| 98% | SFV98-24 00 00 00 | 12 x 24 x 12 | 1000 | 0.25 | 1500 | 0.45 | 2000 | 0.60 | 2500 | .08 | * | * | 196 | 17 |
| 98% | SFV98-04 00 00 00 | 20 x 24 x 12 | 800 | 0.25 | 1200 | 0.45 | 1600 | 0.60 | 2000 | .08 | * | * | 162 | 13 |
| 98% | SFV98-44 00 00 00 | 24 x 24 x 12 | 500 | 0.25 | 750 | 0.45 | 1000 | 0.60 | 1250 | .08 | * | * | 98 | 8 |
| 95% | SFV95-24 00 00 00 | 12 x 24 x 12 | 1000 | 0.14 | 1500 | 0.25 | 2000 | 0.36 | 2500 | 0.51 | 3000 | 0.67 | 196 | 17 |
| 95% | SFV95-04 00 00 00 | 20 x 24 x 12 | 800 | 0.14 | 1200 | 0.25 | 1600 | 0.36 | 2000 | 0.51 | 2400 | 0.67 | 162 | 13 |
| 95% | SFV95-44 00 00 00 | 24 x 24 x 12 | 500 | 0.14 | 750 | 0.25 | 1000 | 0.36 | 1250 | 0.51 | 1500 | 0.67 | 98 | 8 |
| 85% | SFV85-24 00 00 00 | 12 x 24 x 12 | 1000 | 0.07 | 1500 | 0.18 | 2000 | 0.27 | 2500 | 0.40 | 3000 | 0.58 | 196 | 17 |
| 85% | SFV85-04 00 00 00 | 20 x 24 x 12 | 800 | 0.07 | 1200 | 0.18 | 1600 | 0.27 | 2000 | 0.40 | 2400 | 0.58 | 162 | 13 |
| 85% | SFV85-44 00 00 00 | 24 x 24 x 12 | 500 | 0.07 | 750 | 0.18 | 1000 | 0.27 | 1250 | 0.40 | 1500 | 0.58 | 98 | 8 |
| 75% | SFV75-24 00 00 00 | 12 x 24 x 12 | 1000 | 0.05 | 1500 | 0.15 | 2000 | 0.25 | 2500 | 0.38 | 3000 | 0.50 | 196 | 17 |
| 75% | SFV75-04 00 00 00 | 20 x 24 x 12 | 800 | 0.05 | 1200 | 0.15 | 1600 | 0.25 | 2000 | 0.38 | 2400 | 0.50 | 162 | 13 |
| 75% | SFV75-44 00 00 00 | 24 x 24 x12 | 500 | 0.05 | 750 | 0.15 | 1000 | 0.25 | 1250 | 0.38 | 1500 | 0.50 | 98 | 8 |

## Performance Data Notes:

1. PD represents clean pressure drop in inches w.g. The recommended final pressure drop for all models is 2.0 inch w.g. 2. Operation down to zero air flow is satisfactory for all models
3. Efficiency is average and is based on ASHRAE Standard 52.1 test methods for 75, 85, 95 and 98% filters.
4. Performance tolerances conform to section 7.4 of ARI Standard 850.
5. Actual filter header is 5/8 inch under on height an width. Actual depth is 11-1/2 inch
6. Perfmormance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.

## Installation Considerations

Super-Flow® V filters may be installed in Flanders PF-1 Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings or in similar existing hardware. PF-1 Frames are riveted together to form a filter bank. K-Track Filter Framing Modules are especially suitable for medium to large built-up filter banks. Smaller systems and systems with minimum upstream access space are best served using Sureseal Side Access Housings.

Super-Flow® V filters are furnished with a peripheral header on the air entering side and with foam gaskets on the “H” dimension for the 24 x 24 model and “W” dimension on the 12 x 24 and 20 x 24 models.

## Guide Specifications

***1.0 General***

1.1 Medium and high efficiency extended surface low pressure drop minipleat filters shall be Super-Flow® V models as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filters shall consist of multiple minipleat panels bonded to flame-retardant plastic panels on top and bottom and aerodynamic design extruded plastic struts.

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 The average efficiency shall be as determined by ASHRAE Standard 52.1 test methods.

3.3 ASHRAE efficiency 98% models shall be MERV 16, 95% model shall be MERV 14, 85% model shall be MERV 13, 75% model shall be MERV 12 by ASHRAE standard 52.2.

3.4 Filters shall be UL Class 900 listed.

Flanders®
FOREMOST IN AIR FILTRATION

# Super-Flow® Q

***Extended Surface Minipleat Filter***

Model # SFQ

***Bulletin: PB1008-0612***

## General

Super-Flow® Q mini-pleat filters are designed for use in most commercial and industrial HVAC systems where medium to high efficiency filtration is required but with minimal cost. Super-Flow® Q filters are available in average efficiency ranges: 65% and 95%. The filter may be operated at face velocities from 0 to 500 fpm. Super-Flow® Q filters are UL Class 900 listed.

## Construction

Super-Flow® Q filters are constructed of multiple mini-pleat panels bonded to flame-retardant plastic panels on top and bottom to make an unusually strong assembly that is both corrosion and moisture resistant. Aerodynamic extruded plastic vertical supports minimize air entry turbulence. Super-Flow® Q filters are totally rigid making them ideal for variable air volume (VAV) systems, as well as applications downstream of supply fans. The use of all plastic materials makes the Super-Flow® Q totally disposable and incineratable.

## Low Pressure Drop

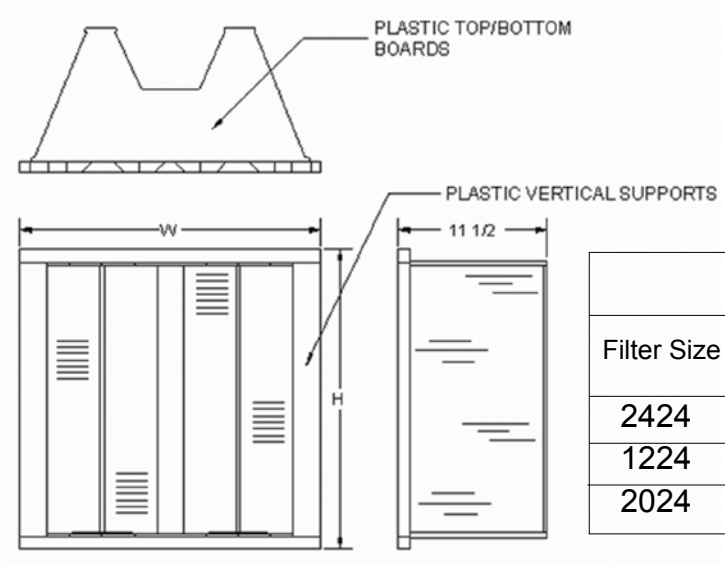
Super-Flow® Q mini-pleat filters have a low clean pressure drop as compared to other rigid style filter designs of the same efficiency. This affords low fan energy costs during much of the life of the filter system. In addition, they are the filters of choice for packaged air conditioning systems that do not have the fan capacity of larger central systems.

## Physical Data

**Media:** Moisture-resistant microfine fiberglass
**Filter Pack:** Minipleat panels
**Media Support:** Adhesive
**Top and Bottom Panels:** Flame-retardant plastic
**Vertical Supports:** Aerodynamic extruded plastic vertical supports
**Operating limits:** 160 F and 100% RH continuous duty
**Actual Header Size:** Nominal size less 5/8" (e.g. a nominal 24" x 24" filter is actually 23-3/8" x 23-3/8")
**Actual Depth:** 11-1/2"

## Important Features

- Longer service life than traditional rigid style because of a very high ratio of media to nominal face area
- Aerodynamic vertical supports minimize air entry turbulence
- Minipleat panels provide rigidity for VAV systems and resistance to turbulent air flow
- May be operated from 0 to 500 fpm face velocity in either air flow direction
- Moisture resistant for humid air applications
- MERV 12 and 15




# Super-Flow® Q

Drawing and Filter Performance

| Filter Performance | | | | |
|---|---|---|---|---|
| Filter Size | Design Flow | Pressure Drop ("w.g.) | | Media Area (sq.ft.) |
| | | 60 - 65% | 90-95% | |
| 2424 | 2000 CFM | 0.39 | 0.56 | 100 |
| 1224 | 1000 CFM | 0.39 | 0.56 | 45 |
| 2024 | 1600 CFM | 0.39 | 0.56 | 85 |

## Guide Specifications

***1.0 General***

1.1 Medium and high efficiency extended surface low pressure drop minipleat filters shall be Super-Flow® Q models as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filters shall consist of multiple minipleat panels bonded to flame-retardant plastic panels on top and bottom and aerodynamic design extruded aluminum struts.

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 The average efficiency shall be as determined by ASHRAE Standard 52.2 test methods.

3.3 ASHRAE efficiency 98% models shall be MERV 15, 95% model shall be MERV 14, 85% model shall be MERV 13, 75% model shall be MERV 11 by ASHRAE Standard 52.2.

3.4 Filters shall be UL Class 900 listed.

Flanders®
FOREMOST IN AIR FILTRATION

# Rigid-Air

***Spun Glass or Synthetic Media Rigid Filter***

***Model # PRP***

***Bulletin: PB1001-0612***

## General

Rigid-Air extended media surface rigid filters are designed for use in most commercial or industrial HVAC systems where medium to high efficiency filtration is required.

They feature your selection of media backed with expanded metal and pleated. The pleats are held in place by rigid pleat separators, available in either plastic or metal styles on 12”depth filters. 6” depth filters feature rugged fiberboard separators. Rigid-Air is available in two media types: lofted fiberglass and micro-fine synthetic with average efficiency ranges of 50-55%, 60-65%, 80-85% and 90-95% per ASHRAE Standard 52.1 and MERV 10-14 per ASHRAE Standard 52.2.

These filters are especially suitable for variable air volume systems. Operating face velocity ranges are from 0 to 375 fpm for 6” deep filters, and from 0 to 675 fpm for 12” deep filters. Three frame styles are available: a single header model, double header model and a box type without header. Rigid-Air filters are UL 900 Class 2 listed. Optional Class 1 listed are available with metal inserts and fiberglass media.

## Installation Considerations

Rigid-Air filters may be installed in PF-1 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings or in similar existing hardware.

The headered version should be selected for use with the hardware listed. If the filter is to be installed so that it protrudes upstream of the holding frame, the box style filter is required.

## Physical Data

**Frame:** 24 ga. corrosion-resistant steel doubleturned flange makes a stronger frame.

**Media:** Lofted fiberglass or micro-fine synthetic.

**Media Supports:** Expanded metal grid with metal or plastic pleat separator.

**Face Grid:** Horizontal and diagonal metal supports.

**Header:** 13/16” wide 26 ga. corrosion-resistant steel.

**Operating Limits**: 180° F 100% RH%.

**Actual Header or Box Filter Face Size:** Nominal size less 5/8” (e.g., a nominal 24” x 24” filter is actually 23 3/8” x 23 3/8”).

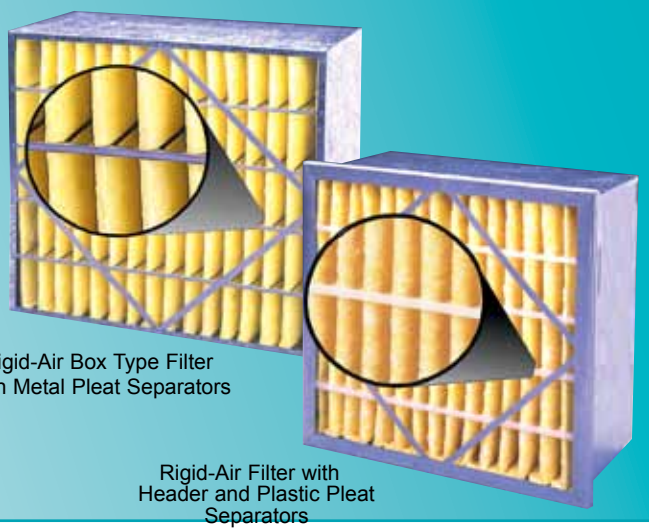
**Actual Depth:** 5-7/8” or 11-1/2”.

Maximum Size: 24" H x 30" W x 12" D

Minimum Size: 12" H x 12" W x 6" D

## Important Features

- Ecologically advanced filtration medium made entirely from recycled materials.
- Rugged corrosion-resistant steel casing minimizes damage during shipping and handling.
- Lofted fiberglass micro-fine or synthetic media is held in position by upstream and downstream plastic or metal pleat supports.
- Units are available with or without header.
- Filters are completely rigid.
- MERV 10-14



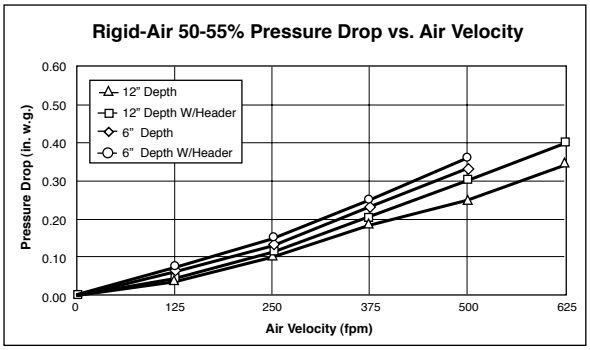
Rigid-Air Box Type Filter
With Metal Pleat Separators

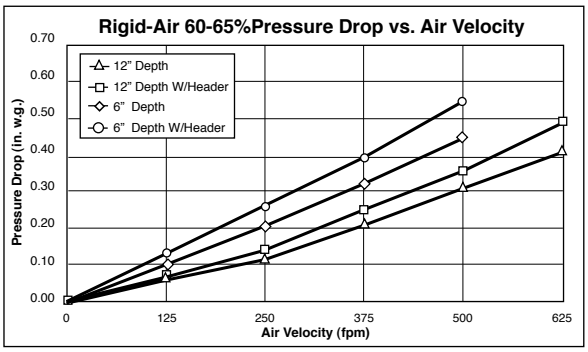
Rigid-Air Filter with
Header and Plastic Pleat
Separators

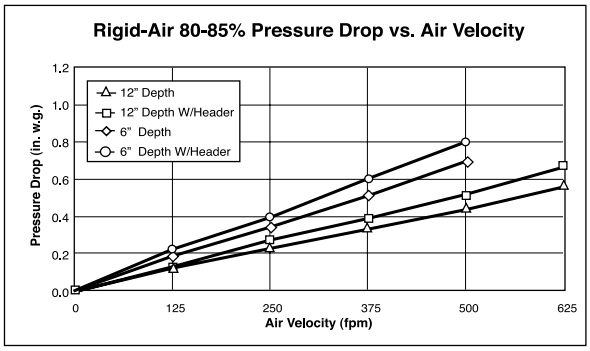
## Rigid Air Performance (Synthetic Media)

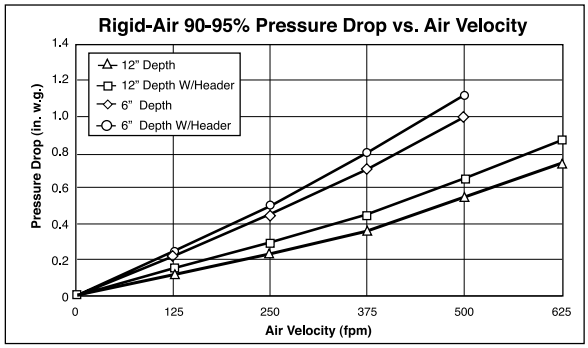
| Nominal Size Inches WxHxD | Air Flow Capacity (CFM) 12" @ 500 FPM 6" @ 250 FPM | Box Style | | Header Style | |
|---|---|---|---|---|---|
| | | Media Area Sq. Ft. | Resistance. "w.g. | Media Area. Sq, /Ft. | Resistance "w.g. |
| **90-95%** | | | | | |
| 24x24x12 | 2000 | 58 | .55 | 50 | .65 |
| 12x24x12 | 1000 | 28 | .55 | 25 | .65 |
| 20x24x12 | 1650 | 47 | .55 | 40 | .65 |
| 20x20x12 | 1400 | 39 | .55 | 33 | .65 |
| 16x20x12 | 1100 | 33 | .55 | 33 | .65 |
| 16x25x12 | 1400 | 41 | .55 | 41 | .65 |
| 24x24x6 | 1000 | 29 | .45 | 25 | .50 |
| 12x24x6 | 499 | 14 | .45 | 13 | .50 |
| 20x24x6 | 830 | 24 | .45 | 21 | .50 |
| 20x20x6 | 700 | 19 | .45 | 17 | .50 |
| 16x20x6 | 550 | 17 | .45 | 17 | .50 |
| 16x25x6 | 700 | 24 | .45 | 24 | .50 |
| **80-85%** | | | | | |
| 24x24x12 | 2000 | 58 | .44 | 50 | .52 |
| 12x24x12 | 1000 | 28 | .44 | 25 | .52 |
| 20x24x12 | 1650 | 47 | .44 | 40 | .52 |
| 20x20x12 | 1400 | 39 | .44 | 33 | .52 |
| 16x20x12 | 1100 | 33 | .44 | 33 | .52 |
| 16x25x12 | 1400 | 41 | .44 | 41 | .52 |
| 24x24x6 | 1000 | 29 | .35 | 25 | .40 |
| 12x24x6 | 499 | 14 | .35 | 13 | .40 |
| 20x24x6 | 830 | 24 | .35 | 21 | .40 |
| 20x20x6 | 700 | 19 | .35 | 17 | .40 |
| 16x20x6 | 550 | 17 | .35 | 17 | .40 |
| 16x25x6 | 700 | 24 | .35 | 24 | .40 |
| **60-65%** | | | | | |
| 24x24x12 | 2000 | 58 | .31 | 50 | .36 |
| 12x24x12 | 1000 | 28 | .31 | 25 | .36 |
| 20x24x12 | 1650 | 47 | .31 | 40 | .36 |
| 20x20x12 | 1400 | 39 | .31 | 33 | .36 |
| 16x20x12 | 1100 | 33 | .31 | 33 | .36 |
| 16x25x12 | 1400 | 41 | .31 | 41 | .36 |
| 24x24x6 | 1000 | 29 | .21 | 25 | .27 |
| 12x24x6 | 499 | 14 | .21 | 13 | .27 |
| 20x24x6 | 830 | 24 | .21 | 21 | .27 |
| 20x20x6 | 700 | 19 | .21 | 17 | .27 |
| 16x20x6 | 550 | 17 | .21 | 17 | .27 |
| 16x25x6 | 700 | 24 | .21 | 24 | .27 |
| **50-55%** | | | | | |
| 24x24x12 | 2000 | 58 | .25 | 50 | .30 |
| 12x24x12 | 1000 | 28 | .25 | 25 | .30 |
| 20x24x12 | 1650 | 47 | .25 | 40 | .30 |
| 20x20x12 | 1400 | 39 | .25 | 33 | .30 |
| 16x20x12 | 1100 | 33 | .25 | 33 | .30 |
| 16x25x12 | 1400 | 41 | .25 | 41 | .30 |
| 24x24x6 | 1000 | 29 | .13 | 25 | .15 |
| 12x24x6 | 499 | 14 | .13 | 13 | .15 |
| 20x24x6 | 830 | 24 | .13 | 21 | .15 |
| 20x20x6 | 700 | 19 | .13 | 17 | .15 |
| 16x20x6 | 550 | 17 | .13 | 17 | .15 |
| 16x25x6 | 700 | 24 | .13 | 24 | .15 |

Notes:
1. PD represents clean pressure drop in inches w.g. Recommended final pressure drop for all models is 1.5" w.g.
2. Efficiency is average and is based on ASHRAE Standard 52.2.
3. Performance tolerances conform to Section 7.4 of ARI Standard 850.
4. Actual filter face size is 5/8" under on height and width. Actual filter depth is 5-7/8" or 11-1/2"
5. Pressure drop values shown are for synthetic media. Glass media approximately 20% greater.
6. Perfmormance values shown in this publication may be averages or estimates intended to generally represent product styles. Contact factory for latest actual test data on specific Flanders models.




Perfmormance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.

## Guide Specifications

***1.0 General***

1.1 Medium and high efficiency self-supporting filters shall be Rigid-Air lofted fiberglass or micro-fine synthetic media rigid filters as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filters shall be constructed of lofted micro-fine fiberglass or micro-fine synthetic media laminated to a non-woven backing, bonded to an expanded metal wire grid and pleated to form the filter pack.

2.2 The filter pack shall be strengthened on the air entering and air exiting sides with horizontal and diagonal metal support members.

2.3 The enclosing frame shall be assembled in a rigid manner and shall incorporate a header on the air entering side if required by the application.

2.4 The filter pack shall be sealed into a 24 ga. corrosion-resistant steel casing with metal or plastic pleat separators on the upstream and downstream sides to maintain pleat configuration.

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Media area must equal or exceed that of the specified filter.

3.3 The average efficiency shall be as determined by the ASHRAE Standard 52.1 test methods.

3.4 The Filter shall meet MERV 10-14 as determined by ASHRAE Standard 52.2 test standards.

3.5 The manufacturer shall guarantee performance as stated in its literature within tolerances as outlined is Section 7.4 of ARI Standard 850.

3.6 Filters to be UL 900 Class 2 or 1 listed.

Flanders®
FOREMOST IN AIR FILTRATION

# PrecisionCell

## *Extended Media Separator Type Rigid Filters*

Model #'s: 89055, 88055 and 86055

***Bulletin: PB1002-0408***

### General

PrecisionCell extended media separator type rigid filters are designed for use in most commercial or industrial HVAC systems where medium to high efficiency filtration is required. PrecisionCell filters are available in average efficiency ranges of 60-65%, 80-85% and 90-95% per ASHRAE Standard 52.1 test methods and offered as a MERV 11 to 14 according to ASHRAE Standard 52.2.

These filters are suitable for variable air volume sys-tems. Operating face velocity ranges are from 0 to 625 FPM for 12" deep filters. Three styles are available: box, single and double-header. PrecisionCell filters are UL Class 900 listed.

### Installation Considerations

PrecisionCell rigid filters may be installed in Flanders PF-1 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings, or in similar existing hardware.

PF-1 are riveted together to form a bank and may be installed for upstream or downstream service. K-Trac Filter Framing Modules are especially suitable for medium to large built-up filter banks. Smaller systems and systems with minimum upstream access space are best served using Sureseal Side Access Housings.

### Construction Options

PrecisionCell filters are designed for temperatures up to 250 degrees Fahrenheit. For high temperature or gas turbine models, see PrecisionCell GT and HT bulletins.

### Physical Data

**Frame:** 24 ga. corrosion-resistant steel. Other frame materials are also available.

**Media**: Moisture-resistant micro-fine fiberglass paper, sealed in the frame with Class 1 urethane.

**Separators**: Hemmed corrugated aluminum. Flanders also offers an exclusive Pureform® separatorless model. Contact factory.

**Headers**: 13/16 " wide corrosion-resistant steel

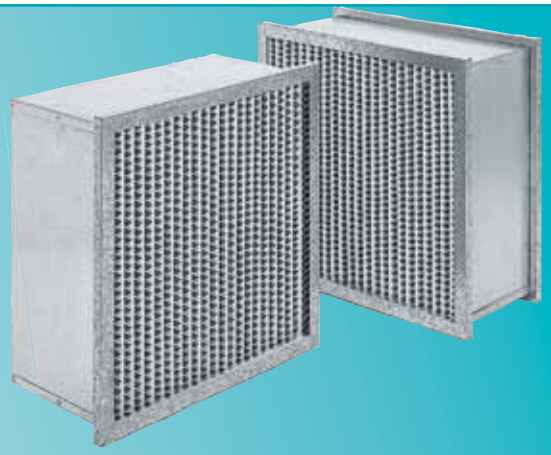
**Operating Limits:** 100% RH and $250^0$ F

**Actual Face:** Nominal size less 5/8"

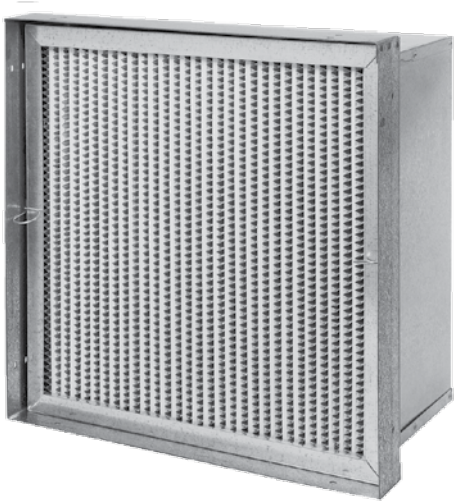
**Actual Depth:** 5-7/8" or 11-1/2"

### Important Features

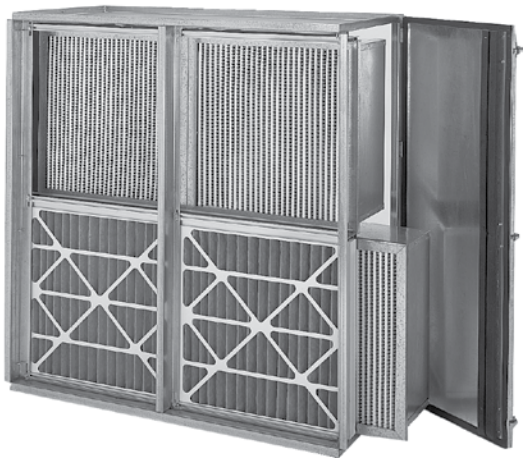
- Rugged 24 gauge corrosion resistant steel casing minimizes damage during shipping and handling
- Corrugated aluminum separators stabilize the moisture-resistant media pack and prevent damage in applications downstream of the supply fan
- MERV 11 to 14



PrecisionCell Single Header filters are ideally suited for upstream or downstream installation in K-Trac Filter Modules. Insert the horizontal sides of the header in the gasketed 1” secondary track of the framing system.



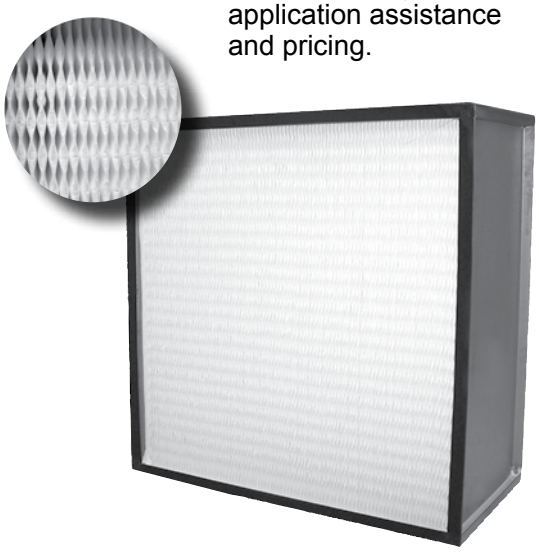
PrecisionCell Single Header filters are recommended for through-the-frame applications. Install by loading the filters through the PF-1 frame until the header comes into contact with the gasket on the frame. Secure in place with Model P knock-on fasteners.



PrecisionCell Single Header filters are designed for use in Sureseal Side Access Filter Housings. The Sureseal unit provides space for prefilters to prolong the life of the filters. Install by sliding the header of the filter into the gasketed 1” secondary filter track.

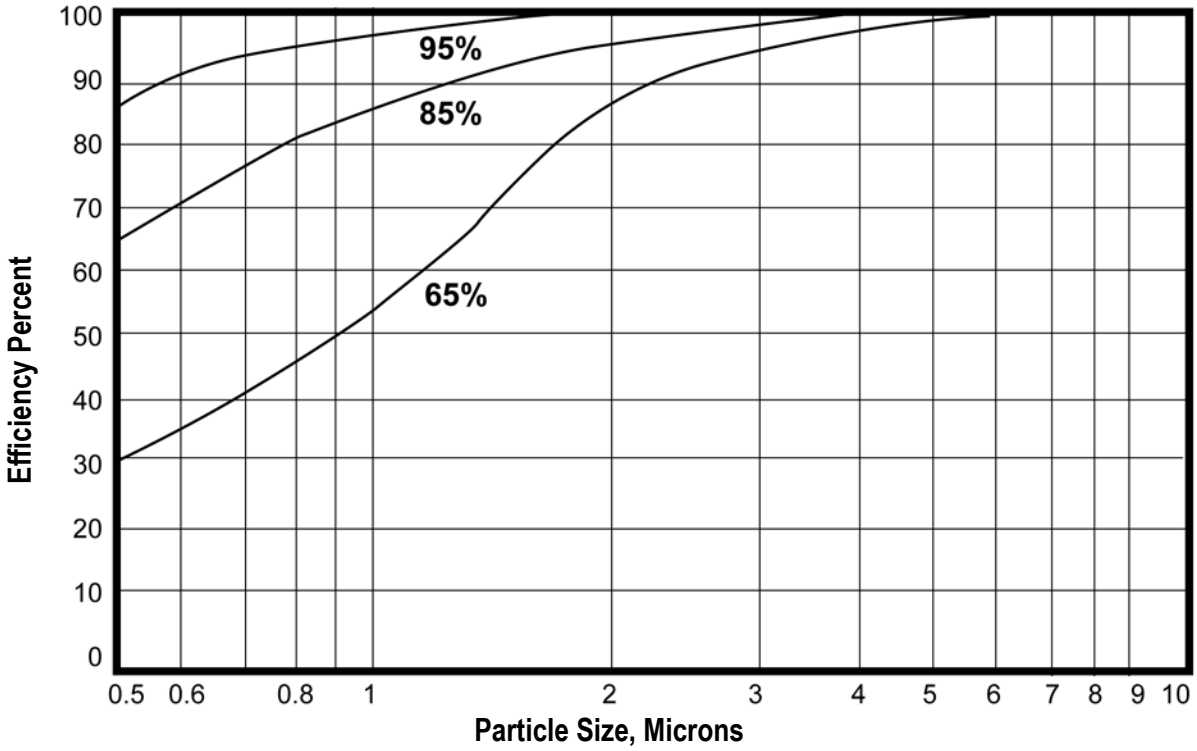
Precisioncell is also available in a Pureform Separatorless Pack.

Contact factory for application assistance and pricing.



| Nominal Depth (Inches) | Efficiency | Nominal Depth HxWxD (Inches) | 250 FPM | | 375 FPM | | 500 FPM | | 625 FPM | | Medi Area (sq.ft.) | Weight Each (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | PD | CFM | PD | CFM | PD | CFM | PD | | |
| 12 | 90-95% | 24x24x12<br>24x12x12 | 1000<br>500 | .25 | 1500<br>750 | .43 | 2000<br>1000 | .68 | 2500<br>1250 | .95 | 125<br>57 | 18<br>9 |
| | 80 - 85% | 24x24x12<br>24x12x12 | 1000<br>500 | .20 | 1500<br>750 | .36 | 2000<br>1000 | .57 | 2500<br>1250 | .78 | 105<br>47 | 18<br>9 |
| | 60 - 65% | 24x24x12<br>24x12x12 | 1000<br>500 | .12 | 1500<br>750 | .26 | 2000<br>1000 | .47 | 2500<br>1250 | .68 | 105<br>47 | 18<br>9 |
| 6 | 90-95% | 24x24x6<br>24x12x6 | 1000<br>500 | .40 | 1500<br>750 | .65 | 6" Depth Filters Not Recommended For These Velocities. | | | | 60<br>27 | 11<br>8 |
| | 80 - 85% | 24x24x6<br>24x12x6 | 1000<br>500 | .35 | 1500<br>750 | .55 | | | | | 50<br>22 | 11<br>8 |
| | 60 - 65% | 24x24x6<br>24x12x6 | 1000<br>500 | .2 | 1500<br>750 | .35 | | | | | 50<br>22 | 11<br>8 |

1. PD represents clean pressure drop in inches w.g. The recommended final pressure drop for all models is 1.5 inches w.g.
2. Efficiency average is based on ASHRAE Standard 52.1 test methods. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
3. Performance tolerances conform to Section 7.4 of ARI Standard 850.
4. Actual face size is 5/8" under on height and width. Actual filter depth is 5-7/8" or 11-1/2".
5. Performance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.



## Application Guidelines

PrecisionCell filters may be used wherever job requirements dictate totally rigid filters and available space will allow only minimal inline depth.

PrecisionCell filters should be selected using 24" x 24" and 24" x 12" face sizes. This allows for 12" increments in height and width of the filter bank and insures that replacement cartridges will be readily available.

PrecisionCell filters should be installed with separators vertical wherever possible. It is permissible to install 24" x 12" face size cartridges with separators horizontal if necessary to meet the size requirements of the filter bank.

## Prefilters

We recommend that Prepleat 40 pleated panel filters or Precision Pak bag filters be used as prefilters for PrecisionCell installations. Where there must be long intervals between filter changes, we recommend using 65% ASHRAE rated PrecisionPak as prefilters. Refer to individual bulletins for performance data on these prefilters.

## VAV Systems

Filter banks should be sized so that the maximum rated flow at design conditions falls within the published recommended velocities. PrecisionCell filters may be applied at any capacity between zero flow and cataloged capacities.

## Hospital Applications

PrecisionCell filters are the preferred selection for hospital systems where code or good practices require that the filters be downstream of coils.

## Gasketed Headers

PrecisionCell headered filters installed in Flanders K-Trac Filter Framing Modules or Sureseal Side Access Housings require gaskets on opposite header sides to prevent air bypass.

To specify PrecisionCell Filters with gasketed headers, add suffix "GU" (upstream), "GD" (downstream) and "GS" (sides) to the model number.

### Guide Specifications

1.0 General

1.1 Medium and high efficiency rigid filters shall be PrecisionCell extended media separator type rigid filters as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

2.0 Filter Construction

2.1 Filters shall be constructed by pleating a continuous sheet of moisture resistant water laid micro fine glass media into closely spaced pleats with hemmed-edge corrugated aluminum separators.

2.2 The filter pack shall be sealed into a 24 gauge corrosion resistant steel frame.

2.3 Filter shall be sealed to the frame with fire retardant solid urethane.

2.4 The enclosing frame shall be assembled in a rigid manner and shall incorporate a single or double header as required by job conditions.

2.5 Filters shall be UL Class 900 listed.

3.0 Performance

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Media area must equal or exceed that of the specified filter.

3.3 The average efficiency shall be as determined by the ASHRAE Standard 52.1 and 52.2 test methods.

3.4 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# PrecisionCell GT

## *Gas Turbine Rigid Filters*

Model #'s: PGT

***Bulletin: PB1004-0408***

### General

The PrecisionCell GT features extra heavy-duty construction to meet the rigorous demands of gas turbine rotary machinery air filtration applications. They may also be utilized where extreme velocity or turbulence have rendered other products to be ineffective. PrecisionCell GT filters are available in ASHRAE efficiencies of 60-65% and 90-95% in either single or double header versions.

### Features

The PrecisionCell GT offers a high dust holding capacity for increased service life, eliminating costly downtime and maintenance associated with filter change out. The media is manufactured of a wet-laid, moisture resistant, dual layer micro-fine fiberglass with high tensile strength and long service life. The heavy gauge hemmed-edge corrugated aluminum separators offer increased pack rigidity with optimal pleat spacing.

The heavy duty corrosion-resistant steel frame and expanded metal faceguards on both the air entering and air leaving sides protect the media pack. Retainer straps and faceguards on both sides prevent filter collapse and maintain rigidity in elevated resistance situations and blow back from turbine surges.

### Physical Data

**Frame:** Heavy duty corrosion-resistant steel

**Media:** Dual layer wet-laid micro-fine fiberglass

**Separators**: Hemmed-edge corrugated aluminum

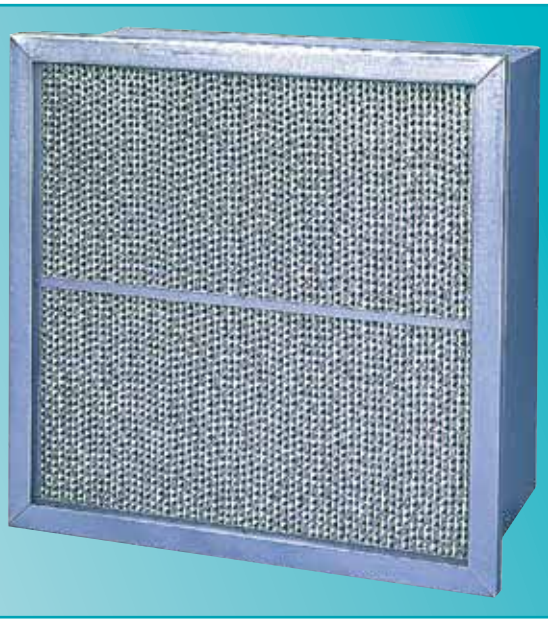
**Headers:** 13/16” wide corrosion resistant steel

**Faceguards:** Galvanized steel expanded

**Gridstraps:** Aluminized steel ”T” strap downstream and horizontal strap upstream

### Important Features

- Dual layer media for increased service life
- Faceguards and grid straps
- Media pack stabilizer
- MERV 11-14



| Nominal Depth (inch) | Efficiency | Nominal Size HxWxD (inch) | 250 fpm | | 375 fpm | | 500 fpm | | 625 fpm | | Media Area (sq.ft.) | Weight Each (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | cfm | pd | cfm | pd | cfm | pd | cfm | pd | | |
| 12 | 65% | 24x24x12 | 1000 | .20 | 1500 | .35 | 2000 | .45 | 2500 | .57 | 140 | 26 |
| | | 24x12x12 | 500 | | 750 | | 1000 | | 1250 | | 69 | 14 |
| 12 | 95% | 24x24x12 | 1000 | .25 | 1500 | .45 | 2000 | .65 | 2500 | .78 | 140 | 27 |
| | | 24x12x12 | 500 | | 750 | | 100 | | 1250 | | 69 | 14 |

Notes:

1. PD represents clean pressure drop in inchw.g. The recommended final pressure drop is 2.5 inch w.g.
2. Operation down to zero velocity is satisfactory for all models.
3. Performance tolerances conform to section 7.4 of ARI Standard 850.
4. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
5. Perfmormance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.

## Guide Specifications

***1.0 General***

1.1 Medium and high efficiency gas turbine rigid filters shall be PrecisionCell GT extended media separator type filters as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filters shall be constructed by pleating a continuous sheet of moisture-resistant dual layer, wet-laid micro-fine glass media into closely spaced pleats with hemmed-edge corrugated aluminum separators.

2.2 The filter pack shall be compression sealed into a 24 ga. corrosion-resistant steel frame.

2.3 The enclosing frame shall be assembled in a rigid manner and shall incorporate a single or double header as required by job conditions.

2.4 corrosion-resistant steel expanded metal faceguards shall be installed on the air entering and leaving sides.

2.5 1/2” corrosion-resistant steel “T” straps shall be installed on the air leaving side and horizontal strap on air entering side.

2.6 Filters shall be UL Class 900 listed.

***3.0 Performance***

3.1 Initial and final resistance shall not exceed the scheduled values.

3.2 Media area must equal or exceed that of the specified filter.

3.3 The average efficiency shall be as determined by the ASHRAE Standard 52.1 test methods.

3.4 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in section 7.4 of ARI Standard 800.

Flanders®
FOREMOST IN AIR FILTRATION

# PrecisionCell HT

## *High Temperature Rigid Filters*

Model #'s 8*355 and 8*255

***Bulletin: PB1003-0408***

### General

PrecisionCell HT filters are designed for high temperature applications up to 900° F. They feature the same rugged construction as the Gas Turbine PrecisionCell. The HT version is manufactured of specially selected components to meet high temperature requirements.

They are ideal for paint drying ovens or any application requiring high efficiency filtration at high temperatures. PrecisionCell HT filters are offered in two high temperature operating ranges; 750° F and 900° F and efficiency ranges of 65%, 85% and 95% per ASHRAE Standard 52.1.

### Construction

The enclosing frame is manufactured of aluminized steel, which is designed to eliminate spalling of corrosion inhibitors at elevated temperatures.

The media pack is stabilized by a media pack retaining bar and captured by faceguards upstream and downstream. Grid strap bracing on the air entering and leaving sides maintain the rigidity and integrity of the PrecisionCell HT.

The media is designed for operation in high temperature applications and manufactured from one continuous sheet of wet-laid micro-fine fiberglass, which provides the required tensile strength and operating pressure drop for these stringent applications.

### Physical Data

**Frame:** 24 ga. aluminized steel

**Media:** Dual layer microfine fiberglass mat.

**Separators:** Hemmed-edge corrugated aluminum

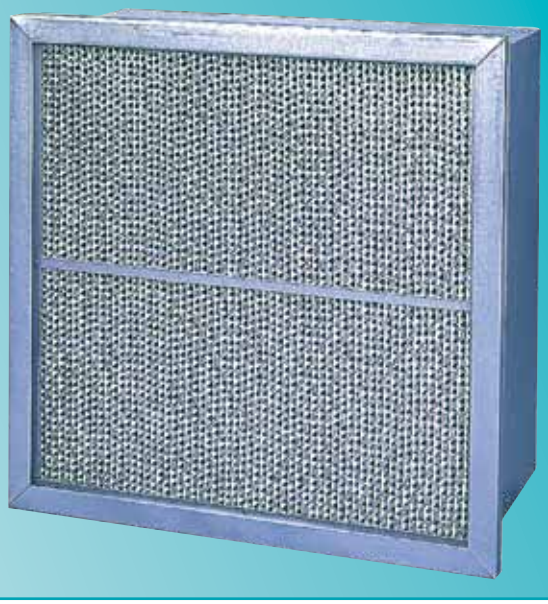
**Header Frame:** 7/8” wide aluminized steel

**Faceguards:** Aluminized steel expanded

**Cross Bracing:** 1/2” “T” strap downstream and horizontal strap upstream

### Important Features

- Continuous duty up to 900° F
- Aluminized steel construction
- 65%, 85%, 95% efficiencies
- Faceguards and grid straps
- MERV 11-14



| Efficiency | Operating Limit °F | Nominal Size H x W x D (inch) | 500 fpm Rating | | Media Area (sq. ft.) | Weight Each (lbs) |
|---|---|---|---|---|---|---|
| | | | cfm | pd | | |
| 60-65% | 750 | 24 x 24 x 12 | 2000 | .45 | 140 | 26 |
| | | 24 x 12 x 12 | 1000 | | 69 | 21 |
| | 900 | 24 x 24 x 12 | 2000 | .50 | 175 | 28 |
| | | 24 x 12 x 12 | 1000 | | 90 | 22 |
| 80-85% | 750 | 24 x 24 x 12 | 2000 | .55 | 140 | 26 |
| | | 24 x 12 x 12 | 1000 | | 69 | 21 |
| | 900 | 24 x 24 x 12 | 2000 | .60 | 175 | 28 |
| | | 24 x 12 x 12 | 1000 | | 90 | 22 |
| 90-95% | 750 | 24 x 24 x 12 | 2000 | .65 | 140 | 26 |
| | | 24 x 12 x 12 | 1000 | | 69 | 21 |
| | 900 | 24 x 24 x 12 | 2000 | .70 | 175 | 28 |
| | | 24 x 12 x 12 | 1000 | | 90 | 22 |

Notes:

1. PD represents clean pressure drop in inches w.g. The recommended final pressure drop is 2.5 inch w.g.
2. Operation down to zero velocity is satisfactory for all models.
3. Efficiencies are average and are based on ASHRAE Standard 52.1 dust spot test methods and 52.2 test methods. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
4. Perfmormance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.

## Guide Specifications

***1.0 General***

1.1 High temperature rigid filters shall be PrecisionCell HT separator type as manufactured by Flanders.

1.2 Filter sizes and temperature ranges shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Filters shall be constructed by pleating a continuous sheet of wet-laid micro-fine glass media into closely spaced pleats with hemmed-edge corrugated aluminum separators.

2.2 The filter pack shall be sealed into a 24 ga. aluminized steel frame with fire-retardant sealant.

2.3 Expanded metal aluminized steel faceguards shall be installed on the air entering and air leaving sides.

2.4 A 1/2" "T" strap shall be installed on the downstream side and 1/2" horizontal strap on the air entering side.

***3.0 Performance***

3.1 Initial and final resistance shall not exceed the scheduled values.

3.2 Media area shall equal that of the scheduled high temperature filter.

3.3 The manufacturer shall guarantee performance as outlined in section 7.4 of ARI Standard 800.

Flanders®
FOREMOST IN AIR FILTRATION

# PrecisionCell II, IIM and MSH

***Extended Surface Mini Pleat Filters***

Model #'s 89655, 88655 and 86655

***Bulletin: PB1005-0612***

## General

PrecisionCell II extended surface minipleat rigid filters are a nominal four inches deep, incinerable and shredable with no metal components. They are designed for use in most commercial and industrial HVAC systems where medium to high efficiency filtration is required. They are available in average efficiency ranges of 60-65%, 80-85% and 90-95% per ASHRAE Standard 52.1 atmospheric dust spot test methods and MERV 11-14 per ASHRAE 52.2.

PrecisionCell II filters are especially suitable for variable air volume systems and are designed to operate at face velocities up to 625 fpm. Four styles are available: standard box style and an optional headered (top and bottom) version that are manufactured with a header for use with existing side access housings. Both are available with metal frames

## Optional Model

Optional headered version PrecisionCell II filters are the same size and have the same functional design as the standard model. The filter is built with a metal-reinforced header on the top and bottom of the filter near the air entering side. The header allows the filter to fit over the standing flanges of the primary filter channel in existing side access housings. Headered PrecisionCell II filters are furnished with a 1/2" wide polyfoam gasket on their vertical sides to provide a filter-to-filter seal.

## In-Line Space-Saving Design

PrecisionCell II filters dramatically reduce in-line space requirements when compared to 12" to 36" deep filters. Their nominal 4" depth makes a convenient "fit" for most installations. High efficiency filtration, that is often required for acceptable Indoor Air Quality, may now be selected by the design engineer without having to compromise space.

## Installation Considerations

PrecisionCell II filters may be installed in Flanders Astr Holding Frames and Surepleat Side Access Housings or similar existing hardware. Astr Holding Frames are riveted together to form a bank and may be installed for upstream or downstream service. Smaller systems and systems with minimum upstream access space are best served using Surepleat Side Access Housings.

## Physical Data

**Frame:**

PrecisionCell II - Double-wall, moisture-resistant beverage board or metal framed corosian-resistant frame with expanded metal face grille on dowstream side.

PrecisionCell IIM and MSH - Metal frame made of corrosion-resistant frame with expanded metal face grille on downstream side.

**Media**: Water-laid microfine fiberglass with a water-repellent binder

**Media Support:** Adhesive-bead pleat separators

**Face Grid:** Horizontal and diagonal supports bonded to the media pack

**Operating Limits:** 160° F and 100% RH

## Important Features

- MERV 11-14
- Space-saving 4" thickness for installation flexibility
- Rugged moisture-resistant bonded frame and unitized pack for rigidity
- Cartridge design is ideal for VAV systems or turbulent flow conditions
- Lightweight and easy to store and handle

Metal Frame Model #'s

- Model #: Metal Box Style:
  89655M, 88655M and 86655M
- Model #: Metal Single Header:
  89655MSH, 88655MSH and 86655MSH

| PrecisionCell II - Capacities and Dimensions | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Efficiency | Nominal Size W x H x D (inch) Note 3 | 125 fpm | | 250 fpm | | 375 fpm | | 500 fpm | | 625 fpm | | Media Area (sq. ft.) | Weight Each (lbs.) |
| | | cfm | PD | cfm | PD | cfm | PD | cfm | PD | cfm | PD | | |
| 90-95% | 24 x 24 x 4 | 500 | .11 | 1000 | .26 | 1500 | .42 | 2000 | .68 | 2500 | .95 | 120 | 6.5 |
| | 24 x 12 x 4 | 250 | .11 | 500 | .26 | 750 | .42 | 1000 | .68 | 1250 | .95 | 60 | 3.5 |
| 80-85% | 24 x 24 x 4 | 500 | .08 | 1000 | .21 | 1500 | .36 | 2000 | .58 | 2500 | .80 | 120 | 6.5 |
| | 24 x 12 x 4 | 250 | .08 | 500 | .21 | 750 | .36 | 1000 | .58 | 1250 | .80 | 60 | 3.5 |
| 60-65% | 24 x 24 x 4 | 500 | .06 | 1000 | .13 | 1500 | .25 | 2000 | .40 | 2500 | .58 | 120 | 6.5 |
| | 24 x 12 x 4 | 250 | .06 | 500 | .13 | 750 | .25 | 1000 | .40 | 1250 | .58 | 60 | 3.5 |

## Other Standard Size PrecisionCell II Filters

| Nominal Size W x H x D (inch) Note 3 | Nominal Capacity (cfm) | Pressure Drop | | | Media Area (sq. ft.) | Weight Each (lbs.) |
|---|---|---|---|---|---|---|
| | | 60-65% | 80-85% | 90-95% | | |
| 20 x 20 x 4 | 1400 | .40 | .58 | .68 | 84 | 4.0 |
| 20 x 16 x 4 | 1100 | | | | 66 | 3.5 |
| 24 x 20 x 4 | 1850 | .40 | .58 | .68 | 105 | 5.5 |
| 24 x 18 x 4 | 1500 | | | | 93 | 5.0 |
| 25 x 20 x 4 | 1750 | .40 | .58 | .68 | 105 | 6.0 |
| 25 x 16 x 4 | 1400 | | | | 84 | 4.0 |

**PrecisionCell II M / MSH Standard Box Style**

| Nominal Size WxHxD (inches) | Nominal Capacity (CFM) | Pressure Drop 90-95% | 80-85% | Approx. 60-65% | Media Area (Sq. Ft.) |
|---|---|---|---|---|---|
| 12x24x4 | 1000 | .75 | .70 | .55 | 58 |
| 16x20x4 | 1111 | .75 | .70 | .55 | 64 |
| 16x25x4 | 1389 | .75 | .70 | .55 | 80 |
| 18x24x4 | 1500 | .75 | .70 | .55 | 86 |
| 20x20x4 | 1388 | .75 | .70 | .55 | 80 |
| 20x24x4 | 1666 | .75 | .70 | .55 | 96 |
| 20x25x4 | 1736 | .75 | .70 | .55 | 100 |
| 24x24x4 | 2000 | .75 | .70 | .55 | 115 |

**PrecisionCell II M / MSH With Header**

| Nominal Size WxHxD (inches) | Nominal Capacity (CFM) | Pressure Drop 90-95% | 80-85% | 60-65% | Approx. Media Area (Sq. Ft.) |
|---|---|---|---|---|---|
| 12x24x4 | 1000 | .85 | .80 | .65 | 48 |
| 16x20x4 | 1111 | .85 | .80 | .65 | 53 |
| 16x25x4 | 1389 | .75 | .70 | .55 | 66 |
| 18x24x4 | 1500 | .75 | .70 | .55 | 71 |
| 20x20x4 | 1388 | .75 | .70 | .55 | 66 |
| 20x24x4 | 1666 | .75 | .70 | .55 | 79 |
| 20x25x4 | 1736 | .75 | .70 | .55 | 82 |
| 24x24x4 | 2000 | .75 | .70 | .55 | 95 |

Notes

1. PD represents clean pressure drop in inches w.g. Recommended final pressure drop for all models is 1.5 inch w.g.
2. Actual filter face size of 24” x 24” and 24” x 12” is 5/8” undercut on height and width. All other sizes are 1/2” undercut on height and width. Actual filter depth is 3-3/4”
3. Efficiency is average and is based on ASHRAE Standard 52.1 and 52.2 test methods.
4. Performance tolerances conform to Section 7.4 of ARI Standard 850.
5. Perfmormance values shown in this publication may be averages or estimates intended to generally represent product styles. Always contact factory for latest actual test data on specific Flanders models.

## Application Guidelines

PrecisionCell II filters should be selected for new installations with 24” H x 24” W and 24” H x 12” W face sizes. These are the most widely used and stocked sizes. This allows for 12” increments in height and width of the filter bank and insures that replacement cartridges will be readily available.

PrecisionCell II filters should be installed with the pleats vertical wherever possible. It is permissible to install 24” H x 12” W face size filters with pleats horizontal if necessary to meet the size requirements of the filter bank.

**PrecisionCell II M and MSH**
Component Chart

**88655 - 04 20 24 MSH D**

**Efficiency Series**
89655. - 90-95%
88655. - 80-85%
86655. - 60-85%
**Nominal Depth**
04 - 3.75" Deep
**Nominal Width**
20 - 19-3/8" Wide
**Nominal Height**
24 - 23-3/8" Tall

**Frame Style**
MSH - Metal w-13/16" Single Header

**Gasket Location**
D - Downstream
U - Upstream
V - One Vertical Side

## HEPA Prefilters

PrecisionCell II filters are ideal as prefilters for Alpha Cell HEPA filters. Their light weight and 4” depth make them an excellent choice for installation in the optional Prefilter Frame Assembly for the Alpha Cell HEPA Filter Holding Frame or in Surelock Side Access HEPA Housings.

Specify the Surelock housing with an optional 4” wide prefilter track for the PrecisionCell II filters, in lieu of the 2” wide prefilter track for pleated panel filters. We recommend the selection of 80-85% PrecisionCell II filters as HEPA prefilters.

## Guide Specifications

***1.0 General***

1.1 Medium and high efficiency extended surface filters shall be PrecisionCell II, M or MSH minipleat panel filters as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

1.3 Filters shall be UL Class 900 listed.

***2.0 Filter Construction***

2.1 The filter pack shall be constructed of water-laid microfine fiberglass media containing a water repellent binder formed into closely spaced pleats held in position by adhesive bead separators.

2.3 PrecisionCell II - The filter pack shall be strengthened on the air entering and air exit sides with horizontal and diagonal support members.

2.4 PrecisionCell II - The enclosing frame shall be double-wall water-resistant beverage board sealed between the walls and to the filter pack with adhesive.

2.5 Models M and MSH - The filter pack shall be enclosed and sealed within a corrosion-resistant metal frame.

2.6 PrecisionCell II MSH filters shall have a single 13/16” diameter header on the air entering side.

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Media area must equal or exceed that of the specified filter

3.3 The average efficiency shall be as determined by ASHRAE Standard 52.1 and 52.2 test methods.

3.4 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# Precision Pak

## *Spun Glass or Synthetic Media Bag Filters*

***Model #: PAP***

***Bulletin: PB1100-0507***

### General

Precision Pak extended surface bag filters are designed for use in most commercial or industrial HVAC systems where medium to high efficiency filtration is required. Precision Pak filters are available in two media types: lofted fiberglass and micro-fine synthetic media with average efficiency ranges of 55%, 65%, 85%, and 95% per ASHRAE Standard 52.1 test methods. Offered MERV 10-15 according to ASHRAE Std. 52.2. Operating face velocities up to 625 fpm are available for all models. Precision Pak filters in depths up to 22" are suited for variable air volume systems. Filters with greater depth are not recommended.

Precision Pak filters are UL 900 Class 2 listed as a standard and are also available in UL Class 900 in both synthetic and glass media.

### Installation Considerations

Precision Pak bag filters may be installed in Flanders PF-1 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings, or in similar existing hardware.

PF-1 Holding Frames are riveted together to form a bank and may be installed for upstream or downstream service. K-Trac Filter Framing Modules are especially suitable for medium to large built-up filter banks. Smaller systems and systems with minimum upstream access space are best served using Sureseal Side Access Housings.

### Physical Data

**Media:** Lofted fiberglass or micro-fine synthetic

**Media Backer:** Non-woven polyester

**Pocket Sealant:** Thermoplastic resin

**Pocket Retainer:** Corrosion-resistant steel

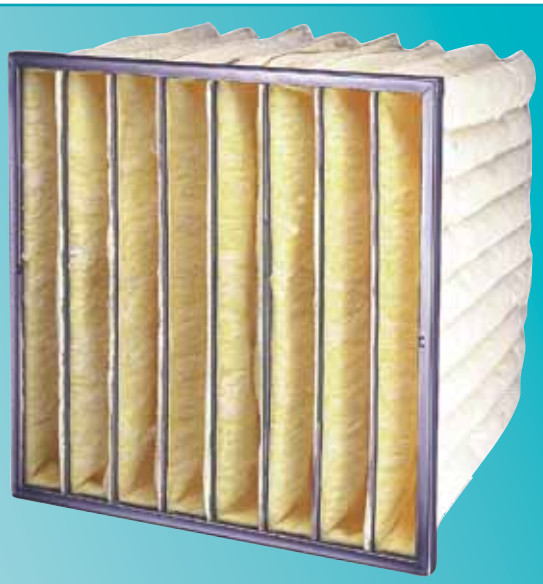
**Header:** 13/16" wide corrosion-resistant steel

**Operating Limits:** 100% RH and 180° F

**Actual Header Face Size:** Nominal size less 5/8" (e.g., a nominal 24" x 24" filter header is actually 23-3/8" x 23-3/8")

### Important Features

- Low initial pressure drop provides longer life.
- Stitched pockets provide aerodynamics for optimal inflation.
- Wide range of cartridge depths, efficiencies and operating capacities are available.
- Edges have an over lock stitch.
- Available in lofted fiberglass or synthetic media.
- 100% stake-through pocket retainers.
- UL 900 Class 1 or 2 available.
- MERV 10-15.



## 95% Synthetic Media MERV 15

| Nominal Depth (Inches) | Number of Pockets | Nom. Width (inch) | Nom. Height (inch) | Media Area (sq. ft) | 375 FPM | | 500 FPM | | 625 FPM | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | PD | cfm | PD | cfm | PD |
| 15 | 12 | 24 | 24 | 65 | 1500 | 0.40 | 2000 | 0.55 | 2500 | 0.75 |
| 15 | 6 | 12 | 24 | 33 | 750 | 0.40 | 1000 | 0.55 | 1250 | 0.75 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.42 | 2000 | 0.60 | 2500 | 0.79 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.42 | 1000 | 0.60 | 1250 | 0.79 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.36 | 2000 | 0.51 | 2500 | 0.67 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.36 | 1000 | 0.51 | 1250 | 0.67 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.34 | 2000 | 0.48 | 2500 | 0.64 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.34 | 1000 | 0.48 | 1250 | 0.64 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.36 | 2000 | 0.52 | 2500 | 0.73 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.36 | 1000 | 0.52 | 1250 | 0.73 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.25 | 2000 | 0.37 | 2500 | 0.52 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.25 | 1000 | 0.37 | 1250 | 0.52 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.24 | 2000 | 0.35 | 2500 | 0.49 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.24 | 1000 | 0.35 | 1250 | 0.49 |
| 36 | 6 | 24 | 24 | 78 | 1500 | 0.32 | 2000 | 0.47 | 2500 | 0.66 |
| 36 | 3 | 12 | 24 | 39 | 750 | 0.32 | 1000 | 0.47 | 1250 | 0.66 |
| 36 | 8 | 24 | 24 | 104 | 1500 | 0.23 | 2000 | 0.33 | 2500 | 0.47 |
| 36 | 4 | 12 | 24 | 52 | 750 | 0.23 | 1000 | 0.33 | 1250 | 0.47 |

## 85% Synthetic Media MERV 13

| Nominal Depth (Inches) | Number of Pockets | Nom. Width (inch) | Nom. Height (inch) | Media Area (sq. ft) | 375 FPM | | 500 FPM | | 625 FPM | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | PD | cfm | PD | cfm | PD |
| 15 | 12 | 24 | 24 | 65 | 1500 | 0.30 | 2000 | 0.44 | 2500 | 0.59 |
| 15 | 6 | 12 | 24 | 33 | 750 | 0.30 | 1000 | 0.44 | 1250 | 0.59 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.32 | 2000 | 0.47 | 2500 | 0.63 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.32 | 1000 | 0.47 | 1250 | 0.63 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.24 | 2000 | 0.36 | 2500 | 0.51 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.24 | 1000 | 0.36 | 1250 | 0.51 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.22 | 2000 | 0.34 | 2500 | 0.48 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.22 | 1000 | 0.34 | 1250 | 0.48 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.30 | 2000 | 0.42 | 2500 | 0.57 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.30 | 1000 | 0.42 | 1250 | 0.57 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.22 | 2000 | 0.33 | 2500 | 0.46 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.22 | 1000 | 0.33 | 1250 | 0.46 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.20 | 2000 | 0.31 | 2500 | 0.43 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.20 | 1000 | 0.31 | 1250 | 0.43 |
| 36 | 6 | 24 | 24 | 78 | 1500 | 0.27 | 2000 | 0.38 | 2500 | 0.51 |
| 36 | 3 | 12 | 24 | 39 | 750 | 0.27 | 1000 | 0.38 | 1250 | 0.51 |
| 36 | 8 | 24 | 24 | 104 | 1500 | 0.20 | 2000 | 0.30 | 2500 | 0.41 |
| 36 | 4 | 12 | 24 | 52 | 750 | 0.20 | 1000 | 0.30 | 1250 | 0.41 |

How to Select a Precision Pak Filter
- Determine the ASHRAE efficiency desired.
- Determine the face velocity needed to fit the system.
- Select the shortest depth possible with a pressure drop that is acceptable.
- Select the most economical filter based on the number of pockets per 24” x 24” size.

## 60-65% Synthetic Media MERV 11

| Nominal Depth (Inches) | Number of Pockets | Nom. Width (inch) | Nom. Height (inch) | Media Area (sq. ft) | 375 FPM | | 500 FPM | | 625 FPM | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | PD | cfm | PD | cfm | PD |
| 15 | 12 | 24 | 24 | 65 | 1500 | 0.18 | 2000 | 0.28 | 2500 | 0.39 |
| 15 | 6 | 12 | 24 | 33 | 750 | 0.18 | 1000 | 0.28 | 1250 | 0.39 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.19 | 2000 | 0.30 | 2500 | 0.41 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.19 | 1000 | 0.30 | 1250 | 0.41 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.16 | 2000 | 0.25 | 2500 | 0.37 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.16 | 1000 | 0.25 | 1250 | 0.37 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.15 | 2000 | 0.24 | 2500 | 0.34 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.15 | 1000 | 0.24 | 1250 | 0.34 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.18 | 2000 | 0.29 | 2500 | 0.39 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.18 | 1000 | 0.29 | 1250 | 0.39 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.15 | 2000 | 0.23 | 2500 | 0.34 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.15 | 1000 | 0.23 | 1250 | 0.34 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.14 | 2000 | 0.22 | 2500 | 0.32 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.14 | 1000 | 0.22 | 1250 | 0.32 |
| 36 | 6 | 24 | 24 | 78 | 1500 | 0.18 | 2000 | 0.26 | 2500 | 0.36 |
| 36 | 3 | 12 | 24 | 39 | 750 | 0.18 | 1000 | 0.26 | 1250 | 0.36 |
| 36 | 8 | 24 | 24 | 104 | 1500 | 0.14 | 2000 | 0.22 | 2500 | 0.31 |
| 36 | 4 | 12 | 24 | 52 | 750 | 0.14 | 1000 | 0.22 | 1250 | 0.31 |

## 50-55% Synthetic Media MERV 10

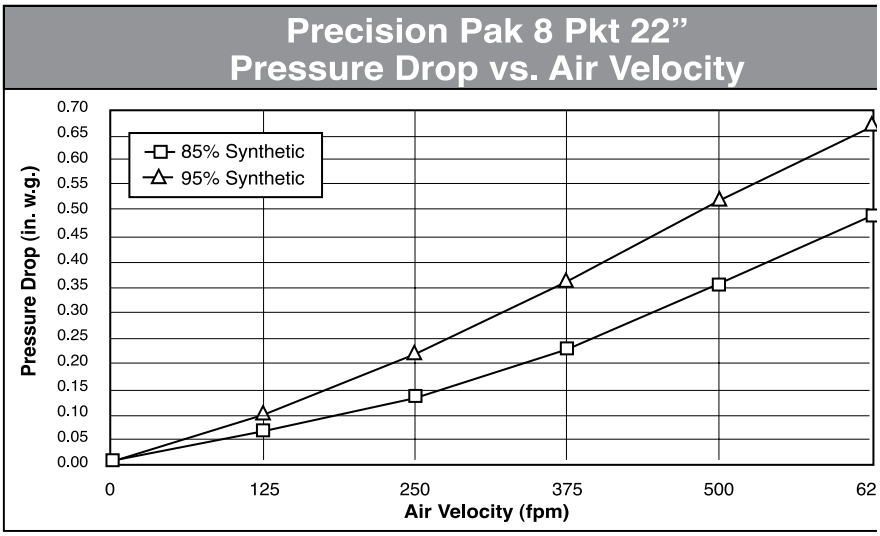
| Nominal Depth (Inches) | Number of Pockets | Nom. Width (inch) | Nom. Height (inch) | Media Area (sq. ft) | 375 FPM | | 500 FPM | | 625 FPM | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | PD | cfm | PD | cfm | PD |
| 15 | 12 | 24 | 24 | 65 | 1500 | 0.18 | 2000 | 0.28 | 2500 | 0.35 |
| 15 | 6 | 12 | 24 | 33 | 750 | 0.18 | 1000 | 0.28 | 1250 | 0.35 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.19 | 2000 | 0.30 | 2500 | 0.37 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.19 | 1000 | 0.30 | 1250 | 0.37 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.16 | 2000 | 0.25 | 2500 | 0.33 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.16 | 1000 | 0.25 | 1250 | 0.33 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.15 | 2000 | 0.24 | 2500 | 0.31 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.15 | 1000 | 0.24 | 1250 | 0.31 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.16 | 2000 | 0.26 | 2500 | 0.35 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.16 | 1000 | 0.26 | 1250 | 0.35 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.14 | 2000 | 0.21 | 2500 | 0.31 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.14 | 1000 | 0.21 | 1250 | 0.31 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.14 | 2000 | 0.20 | 2500 | 0.29 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.14 | 1000 | 0.20 | 1250 | 0.29 |
| 36 | 6 | 24 | 24 | 78 | 1500 | 0.15 | 2000 | 0.24 | 2500 | 0.32 |
| 36 | 3 | 12 | 24 | 39 | 750 | 0.15 | 1000 | 0.24 | 1250 | 0.32 |
| 36 | 8 | 24 | 24 | 104 | 1500 | 0.14 | 2000 | 0.20 | 2500 | 0.29 |
| 36 | 4 | 12 | 24 | 52 | 750 | 0.14 | 1000 | 0.20 | 1250 | 0.29 |

Notes:

1. PD represents clean pressure drop in inches w.g. for synthetic media filters.
2. The recommended final pressure drop for all models is 1.0 inch w.g.
3. Gross media area is approximately 7% more than the net area listed.
4. Values shown may be averages or estimates typical of products styles.
   Contact factory for test data on specific models.

## Application Guidelines

Precision Pak filters should be installed with pockets vertical wherever possible. It is acceptable to install 24" x 12" face size filters with pockets horizontal if necessary to meet the size requirements of the filter banks.




## Gasketed Headers

Precision Pak filters installed in Flanders K-Trac Filter Framing Modules or Sureseal Side Access Housings require polyfoam gaskets on opposite header sides to prevent air bypass. To specify Precision Pak filters with gasketed headers, add suffix "SA" (side access), "GU" (upstream), "GD" (downstream) and "GS" (sides) to the model number.

## Prefilters

Properly selected bag filters without prefilters will generally require change out annually in typical HVAC applications. Because of the frequent maintenance expense and increase in fan kW input using prefilters, they are often recommended with 85% and 95% efficient Precision Pak final filters. However, the energy cost to operate a prefilter seldom warrants their use with 55% or 65% filters.

## Guide Specifications

### 1.0 General

1.1 Medium and high efficiency self-supporting filters shall be Precision Pak extended surface type as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as scheduled on the drawings.

### 2.0 Filter Construction

2.1 Filters shall be constructed of lofted fiberglass or micro-fine synthetic media encased in a thin non-woven polyester backer mat.

2.2 Open area on the filter face for air passage shall be not less than 90%.

2.3 Flexible internal support stitching shall maintain individual pockets in a controlled form under all rated air flow conditions. Stitching shall be sealed with thermoplastic sealant. Edges shall be finished with over lock stitch to prevent air unraveling.

2.4 Pockets shall be 100% stake-through crimped to prevent media pullout.

2.5 Pockets shall be bonded to corrosion-resistant steel casings and assembled into a corrosion-resistant steel header.

2.6 Filters shall be UL 900 Class 2 or Class 1 listed.

### 3.0 Performance

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Media area must equal or exceed that of the specified filter.

3.3 The average efficiency shall be as determined by the ASHRAE Standard 52.1 and 52.2 test methods.

3.4 The manufacturer shall guarantee performance as stated in its literature within tolerances as out-lined is Section 7.4 of ARI Standard 850.

Flanders®
FOREMOST IN AIR FILTRATION

# Precision Pak XDH

## *Semi-Rigid, High Dust Holding Capacity Extended Surface Bag Filter*

***Model #: XDH***

***Bulletin: PB1102-0507***

### General

Precision Pak XDH high dust holding capacity extended surface bag filters are designed for use in most commercial or industrial HVAC systems where medium to high efficiency filtration is required. Precision Pak XDH filters are available in micro-fine polyolefin synthetic media with average efficiency ranges of 65%, 85% and 95% per ASHRAE Standard 52.1 test methods, offered MERV 11-14 per ASHRAE 52.2. Operating face velocities up to 625 fpm are available for all models.

### Ideal for VAV

Precision Pak XDH filters in depths up to 22" are semi-rigid and thus ideally suited for variable air volume systems. Precision Pak XDH filters are UL Class 900 listed.

### Dual Phase Media

Precision Pak XDH bag filters use dual phase polyolefin synthetic media. The media is thermally bonded without binders and consists of non-woven continuous hydrophobic (water repellent) fibers that resist water and most chemicals. In addition, the media is gradient density, dual stage and electrostatically enhanced for extra high dust holding (XDH) capacity. Further, the media is non-shedding and performs exceptionally well in high velocity and turbulent applications.

### Extra High Dust Holding

A typical XDH bag filter was tested for ASHRAE synthetic dust holding capacity against similar filters with fiberglass and meltblown synthetic media. Results showed that the XDH filter held approximately 150% more dust by weight than the others when run to the same final resistance. This characteristic makes it an excellent choice for very dusty areas and for those systems where long service life and reduced maintenance are key concerns.

### Physical Data

**Media:** Dual Phase, 100% Synthetic
**Media Backer:** Non-woven polyester
**Pocket Sealant:** Thermoplastic resin
**Pocket Retainer:** Corrosion Resistant steel
**Header:** 13/16" wide corrosion resistant
**Operating Limits:** 100% RH and 180° F
**Actual Header Face Size:** Nominal size less 5/8" (e.g., a nominal 24" x 24" filter header is actually 23-3/8" x 23-3/8")

### Important Features

- Semi rigid pocket filter
- Extra high dust holding capacity
- Dual stage gradient density electrostatic media
- Low initial pressure drop provides long life
- Wide range of depths and face sizes
- Linear stitching for optimum pocket form
- Three ASHRAE efficiencies: 65%, 85%, 95%
- Pocket perimeter ultrasonically sealed
- MERV 11-14

## 95% XDH Synthetic Media Filters MERV 14

| Nominal Depth (inch) | Number of Pockets | Nom. Width (Inch) | Nom. Height (Inch) | Media Area (sq. ft.) | 375 fpm | | 500 fpm | | 625 fpm | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | pd | cfm | pd | cfm | pd |
| 12 | 12 | 24 | 24 | 52 | 1500 | 0.44 | 2000 | 0.64 | 2500 | 0.81 |
| 12 | 6 | 12 | 24 | 26 | 750 | 0.44 | 1000 | 0.64 | 1250 | 0.81 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.37 | 2000 | 0.51 | 2500 | 0.68 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.37 | 1000 | 0.51 | 1250 | 0.68 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.33 | 2000 | 0.46 | 2500 | 0.62 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.33 | 1000 | 0.46 | 1250 | 0.62 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.29 | 2000 | 0.42 | 2500 | 0.55 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.29 | 1000 | 0.42 | 1250 | 0.55 |
| 26 | 6 | 24 | 24 | 56 | 1500 | 0.33 | 2000 | 0.46 | 2500 | 0.62 |
| 26 | 3 | 12 | 24 | 28 | 750 | 0.33 | 1000 | 0.46 | 1250 | 0.62 |
| 26 | 8 | 24 | 24 | 75 | 1500 | 0.30 | 2000 | 0.42 | 2500 | 0.57 |
| 26 | 4 | 12 | 24 | 38 | 750 | 0.30 | 1000 | 0.42 | 1250 | 0.57 |
| 26 | 10 | 24 | 24 | 94 | 1500 | 0.26 | 2000 | 0.39 | 2500 | 0.52 |
| 26 | 5 | 12 | 24 | 47 | 750 | 0.26 | 1000 | 0.39 | 1250 | 0.52 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.29 | 2000 | 0.42 | 2500 | 0.55 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.29 | 1000 | 0.42 | 1250 | 0.55 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.26 | 2000 | 0.37 | 2500 | 0.51 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.26 | 1000 | 0.37 | 1250 | 0.51 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.24 | 2000 | 0.35 | 2500 | 0.48 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.24 | 1000 | 0.35 | 1250 | 0.48 |

## 85% XDH Synthetic Media Filters MERV 13

| Nominal Depth (inch) | Number of Pockets | Nom. Width (Inch) | Nom. Height (Inch) | Media Area (sq. ft.) | 375 fpm | | 500 fpm | | 625 fpm | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | pd | cfm | pd | cfm | pd |
| 12 | 12 | 24 | 24 | 52 | 1500 | 0.29 | 2000 | 0.40 | 2500 | 0.64 |
| 12 | 6 | 12 | 24 | 26 | 750 | 0.29 | 1000 | 0.40 | 1250 | 0.64 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.26 | 2000 | 0.37 | 2500 | 0.51 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.26 | 1000 | 0.37 | 1250 | 0.51 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.23 | 2000 | 0.33 | 2500 | 0.44 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.23 | 1000 | 0.33 | 1250 | 0.44 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.22 | 2000 | 0.31 | 2500 | 0.42 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.22 | 1000 | 0.31 | 1250 | 0.42 |
| 26 | 6 | 24 | 24 | 56 | 1500 | 0.25 | 2000 | 0.36 | 2500 | 0.48 |
| 26 | 3 | 12 | 24 | 28 | 750 | 0.25 | 1000 | 0.36 | 1250 | 0.48 |
| 26 | 8 | 24 | 24 | 75 | 1500 | 0.22 | 2000 | 0.32 | 2500 | 0.43 |
| 26 | 4 | 12 | 24 | 38 | 750 | 0.22 | 1000 | 0.32 | 1250 | 0.43 |
| 26 | 10 | 24 | 24 | 94 | 1500 | 0.19 | 2000 | 0.29 | 2500 | 0.40 |
| 26 | 5 | 12 | 24 | 47 | 750 | 0.19 | 1000 | 0.29 | 1250 | 0.40 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.24 | 2000 | 0.35 | 2500 | 0.46 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.24 | 1000 | 0.35 | 1250 | 0.46 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.20 | 2000 | 0.31 | 2500 | 0.42 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.20 | 1000 | 0.31 | 1250 | 0.42 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.15 | 2000 | 0.26 | 2500 | 0.37 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.10 | 1000 | 0.26 | 1250 | 0.37 |

Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

How to Select a Precision Pak XDH Filter:

- Determine the ASHRAE efficiency desired.
- Determine the face velocity needed to fit the system.
- Select the shortest depth possible with a pressure drop that is acceptable.
- Select the most economical filter based on the number of pockets per 24” x 24” size.

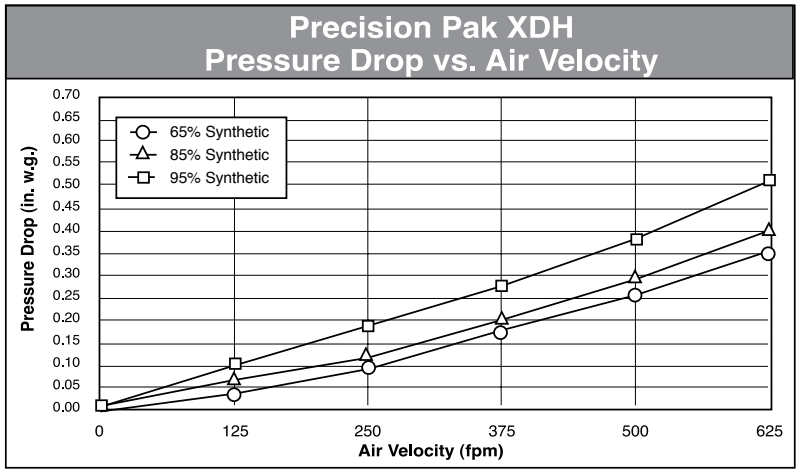
## 65% XDH Synthetic Media Filters MERV 11

| Nominal Depth (inch) | Number of Pockets | Nom. Width (Inch) | Nom. Height (Inch) | Media Area (sq. ft.) | 375 fpm | | 500 fpm | | 625 fpm | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | cfm | pd | cfm | pd | cfm | pd |
| 12 | 12 | 24 | 24 | 52 | 1500 | 0.28 | 2000 | 0.37 | 2500 | 0.62 |
| 12 | 6 | 12 | 24 | 26 | 750 | 0.28 | 1000 | 0.37 | 1250 | 0.62 |
| 22 | 6 | 24 | 24 | 48 | 1500 | 0.25 | 2000 | 0.35 | 2500 | 0.48 |
| 22 | 3 | 12 | 24 | 24 | 750 | 0.25 | 1000 | 0.35 | 1250 | 0.48 |
| 22 | 8 | 24 | 24 | 64 | 1500 | 0.22 | 2000 | 0.31 | 2500 | 0.42 |
| 22 | 4 | 12 | 24 | 32 | 750 | 0.22 | 1000 | 0.31 | 1250 | 0.42 |
| 22 | 10 | 24 | 24 | 79 | 1500 | 0.21 | 2000 | 0.29 | 2500 | 0.40 |
| 22 | 5 | 12 | 24 | 40 | 750 | 0.21 | 1000 | 0.29 | 1250 | 0.40 |
| 26 | 6 | 24 | 24 | 56 | 1500 | 0.24 | 2000 | 0.34 | 2500 | 0.46 |
| 26 | 3 | 12 | 24 | 28 | 750 | 0.24 | 1000 | 0.34 | 1250 | 0.46 |
| 26 | 8 | 24 | 24 | 75 | 1500 | 0.21 | 2000 | 0.30 | 2500 | 0.41 |
| 26 | 4 | 12 | 24 | 38 | 750 | 0.21 | 1000 | 0.30 | 1250 | 0.41 |
| 26 | 10 | 24 | 24 | 94 | 1500 | 0.18 | 2000 | 0.26 | 2500 | 0.37 |
| 26 | 5 | 12 | 24 | 47 | 750 | 0.18 | 1000 | 0.26 | 1250 | 0.37 |
| 30 | 6 | 24 | 24 | 65 | 1500 | 0.23 | 2000 | 0.33 | 2500 | 0.44 |
| 30 | 3 | 12 | 24 | 33 | 750 | 0.23 | 1000 | 0.33 | 1250 | 0.44 |
| 30 | 8 | 24 | 24 | 87 | 1500 | 0.19 | 2000 | 0.29 | 2500 | 0.40 |
| 30 | 4 | 12 | 24 | 43 | 750 | 0.19 | 1000 | 0.29 | 1250 | 0.40 |
| 30 | 10 | 24 | 24 | 108 | 1500 | 0.14 | 2000 | 0.24 | 2500 | 0.35 |
| 30 | 5 | 12 | 24 | 54 | 750 | 0.14 | 1000 | 0.24 | 1250 | 0.35 |

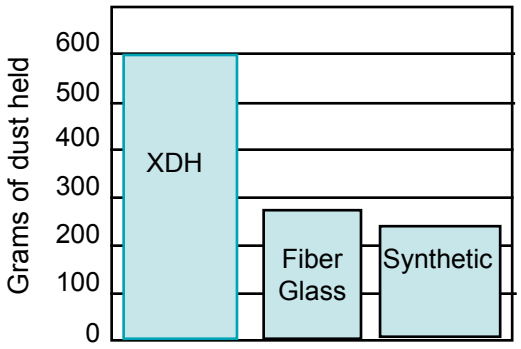
Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

How to Select a Precision Pak XDH Filter:

- Determine the ASHRAE efficiency desired.
- Determine the face velocity needed to fit the system.
- Select the shortest depth possible with a pressure drop that is acceptable.
- Select the most economical filter based on the number of pockets per 24” x 24” size.




Data in graph is for a 26” deep, 10 pocket bag.




Comparison of XDH to fiberglass and synthetic filters with the same media content.

# MS/MSG

## *Moisture/Oil Mist Separators*

***Model #'s: MS and MSG***

***Bulletin: PB600-1206***



### General

Flanders models MS and MSG Moisture Separators are designed for use in air handling systems requiring collection of water droplets or oil mist. Water droplets in outside air is usually fog. In supply air, water droplets may occur as carry over from cooling coils and evaporative media or unevaporated moisture downstream of humidifiers. Oil mist in return air is most often found in production machine shops.

### Application

The optimum face velocity for MS and MSG Moisture Separators is 500 fpm, and at this point they are 98% efficient on 20 micrometer liquid droplets. Performance is relatively unchanged in the recommended range of 450 fpm to 550 fpm. Above 550 fpm captured liquid may be re-entrained in the airstream.

The system designer must recognize that moisture separators will also act as low efficiency particulate prefilters and that the separator bank pressure drop will increase over time. System static pressure calculations for fan selection should include an allowance of at least 0.50 in. w.g. final static pressure for dirty wet moisture separators.

Models MS and MSG Moisture Separators are meant to be installed with their pleats vertical so that collected liquid will drain easily to the bottom of the frame and out through five 3/8 in. diameter holes. The top of the frame has an arrow to guide the installer as to the proper air flow direction and position for proper drainage.

### Installation Considerations

In a mixed air (outside air/return air) system, place the Moisture Separators in the outside air duct if possible. Otherwise, place them as the first filtration stage ahead of the particulate filters.

Moisture Separators may be installed in built-up banks using Flanders Type 9 Holding Frames or in Flanders Side Access Housings specially equipped with drain tubes. When built-up banks are used, field-fabricated water drain pans should be installed between each horizontal row of frames.

For banks four or five separators wide, locate 3/4 in. I.D. downspouts at each end. For banks six separators wide or wider, locate downspouts at each end and proportionately along the width of the bank, one for every six separators or a fraction thereof. Example: a six separator wide bank would have downspouts at both ends and one in the middle; an eight separator wide bank would have downspouts at both ends and two more proportionately spaced along the width of the bank. If not individually trapped, the downspouts should be manifolded to a 1 in. I.D. or larger collector with a trap of a depth exceeding the negative pressure expected in the plenum where the separator bank is located.

Sureseal two-stage Side Access Housings may be special-ordered with the 2 in. tracks fitted with drain tubes to hold both Moisture Separators and particulate final filters. If the 2 in. tracks are to be used for 2 in. prefilters, a Surepleat single-stage Side Access Housing with drain tube should be selected and located upstream of the particulate filter housing.

### Important Features

- Efficiency of 98% on 20 micrometer liquid droplets at 500 fpm
- Corrosion-resistant construction
- Nominal 2 in. thick for application flexibility
- Models for both built-up banks and side access housings

## Construction

Moisture separators are constructed much like permanent metal washable filters. The nominal two inch thick media pack consists of 15 individual layers of pleated and flat aluminum wire mesh.

Air entering and exiting support grids are expanded metal, and the media enclosing frame is 16 ga. galvanized steel with five 3/8 in. diameter holes in the bottom for drainage.

| Model Number | | | Recommended Range of Face Velocities (FPM) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| For Built-up Banks | For Side Access Housings (Note 1) | Nominal Size HxWxD inches (Note 2) | 375 | | 450 | | 500 | | 550 | | 625 | | Weight Each (lbs) |
| MS24242 | MSG-24242 | 24x24x2 | 1500 | .14 | 1800 | .20 | 2000 | .22 | 2200 | .28 | 2500 | .34 | 15 |
| MS-12242 | MSG-12242 | 12x24x2 | 750 | .14 | 900 | .20 | 1000 | .22 | 1100 | .28 | 1250 | .34 | 9 |
| MS-24122 | MSG-24122 | 24x12x2 | 750 | .14 | 900 | .20 | 1000 | .22 | 1100 | .28 | 1250 | .34 | 9 |

Notes:

1. Model MSG separators for use in side access housings with drain tube option are furnished with neoprene gaskets on vertical sides to prevent moisture bypass.
2. Actual separator size is 5/8 in. under on both height and width. Actual depth is 1-7/8 in.
3. For maximum capture of liquid droplets, operate separators in the 500 fpm + 10% range.
4. Pd= Pressure Drop, in w.g.
5. Special sizes are available. Contact your local representative or the factory.
6. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

## Guide Specifications

***1.0 General***

1.1 Moisture separators shall be Models MS or MSG as manufactured by Flanders .

1.2 Separator sizes and capacities shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 Enclosing frame shall be nominal 2 inches thick 16 ga. galvanized steel with five 3/8 in. drain holes in the bottom.

2.2 The media pack shall consist of 15 individual layers of pleated and flat aluminum wire mesh.

2.3 The face grids on the entry and exit sides shall be expanded metal.

2.4 Arrow on top of frame shall indicate placement of separator as to air flow and drainage position.

2.5 Model MSG separators for use in side access housings with drain tube option shall have neoprene gaskets on vertical frame sides to prevent liquid by-pass.

***3.0 Performance***

3.1 Separators shall have a minimum efficiency of 98% on 20 micrometer water or oil droplets when operated at 500 fpm gross face velocity.

3.2 Initial resistance shall not exceed the scheduled values.

***4.0 Installation***

4.1The installing contractor shall construct filter banks or provide housings with drain tubes in accordance with the separator manufacturer's recommendations.

4.2 Drain tubes and/or drain manifold shall be trapped before running the piping to an open drain.

# KKM

## *Washable Permanent Filters*

***Model #'s: 50055 Galvanized and 51255 Aluminum***

***Bulletin: PB602-0612***



## General

Flanders Model KKM is a heavy duty, washable, aluminum media, all metal filter. KKM is suitable for all residential and commercial applications.

The KKM offers large filtering area, high dust holding capacity, uniform loading and low resistance to air flow. It is recommended that the filter media be coated with dust adhesive for optimum performance.

## Construction

The KKM filter has a rugged galvanized steel frame that encloses the bonded expanded aluminum mesh media. The corners are mitered and the frame is secured with pop rivet(s). The KKM has drain holes in three corners.

The bonded aluminum media is slit and expanded to several different size openings. This design allows contaminants to be trapped throughout the entire filter depth and not just at the surface. The media is retained within the frame by expanded galvanized steel.

An all-aluminum version of the KKM is also offered, which has an aluminum frame and is constructed with expanded aluminum retainers.

The standard offering of KKM filters includes six of the most popular face sizes in 1" and 2" depths. Special face sizes and 1/2" depth filters are also available. For ease of installation, all filters are undercut slightly on length, width and depth.

## Filter Coating and Cleaning

The KKM performs best as an impingement type filter. Optimum performance requires use of a dust adhesive on the media. Flanders offers Kwik Kut Filter Spray and Filter Boost.

Wash with a mild detergent and rinse to remove collected dust.

## Standard KKM with Steel Frame

| Nominal Size H x W x D | Actual Size H x W x D | Qty. per Carton | Carton Wgt. (lbs) |
|---|---|---|---|
| 10 x 20 x 1 | 9-3/4 x 19-3/4 x 7/8 | 6 | 1.7 |
| 15 x 20 x 1 | 14-3/4 x 19-3/4 x 7/8 | 6 | 2.5 |
| 16 x 20 x 1 | 15-5/8 x 19-5/8 x 7/8 | 6 | 2.7 |
| 16 x 25 x 1 | 15-5/8 x 24-5/8 x 7/8 | 6 | 3.3 |
| 20 x 20 x 1 | 19-5/8 x 19-5/8 x 7/8 | 6 | 3.3 |
| 20 x 25 x 1 | 19-5/8 x 24-5/8 x 7/8 | 6 | 4.0 |
| 10 x 20 x 2 | 9-3/4 x 19-3/4 x 1-7/8 | 6 | 2.4 |
| 16 x 20 x 2 | 15-5/8 x 19-5/8 x 1-7/8 | 6 | 3.9 |
| 16 x 25 x 2 | 15-5/8 x 24-5/8 x 1-7/8 | 6 | 4.2 |
| 20 x 20 x 2 | 19-5/8 x 19-5/8 x 1-7/8 | 6 | 4.8 |
| 20 x 25 x 2 | 19-5/8 x 24-5/8 x 1-7/8 | 6 | 4.8 |
| 24 x 24 x 2 | 23-5/8 x 23-5/8 x 1-7/8 | 6 | 5.8 |

## Guide Specifications

***1.0 General***

1.1 Washable air filters shall be KKM Air Filters as supplied by Flanders.

***2.0 Filter Construction***

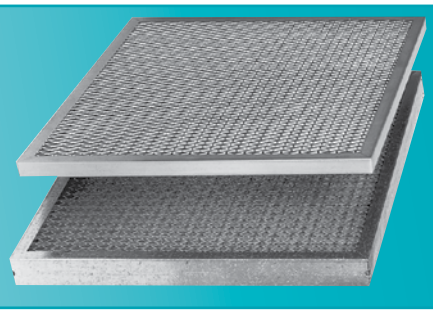
2.1 Frame shall be galvanized steel with mitered corners and secured with pop rivet(s). Frame shall have drain holes in three corners.

2.2 Washable filter media shall be multiple layers of slit and expanded aluminum bonded together.

2.3 Media retainer shall be expanded, galvanized steel.

## Important Features

- Heavy duty, steel frame construction
- Expanded steel retainers
- Bonded expanded aluminum media
- All aluminum version available
- Washable and reusable
- Standard and special sizes are available



Flanders®
FOREMOST IN AIR FILTRATION

# Pre Pleat AC

## *Carbon Pleated Filter*

***Model #: 81255***

***Bulletin: PB1201-1104***



### General

Pre Pleat with activated carbon works almost like an odor "sponge." This versatile filter is an excellent choice in commercial/industrial settings for remediation of minor odor problems.

This filter combines the low resistance, high dust holding capacity of a pleated filter with the odor removing abilities of activated carbon. The base filtration medium is polyester synthetic fiber. It has a generous 100% add-on of activated carbon by weight. (Weight of activated carbon equals the weight of the media to which it is adhered.) As odor producing gases come in contact with the activated carbon in the filter, they are adsorbed...trapped and held in millions of microscopic carbon pores.

### Construction

The filter medium is comprised of a polyester synthetic fiber felt with an add-on of powdered, activated carbon. This medium is adhered with hot-melt adhesive to an expanded metal backing, then folded into an accordian pleat arrangement. This media pack is encased and sealed within a moisture resistant kraft board frame.

### Activity Level

Ability of activated carbon to catch and hold a gas or vapor is referred to as its level of "activity." The higher the activity level, the higher its adsorption level. The activated carbon used in the in this filter is a coconut shell material with an activity level of 60% or more when subjected to the most common test, using carbon tetrachloride.

However, the effectiveness of activated carbon will actually vary considerably depending upon the odor or vapor to be removed. Typically, the adsorptive capacity of activated carbon is higher for those adsorbates with higher molecular weights and boiling points. A chart on the back side of this sheet lists activated carbon's typical effectiveness on various substances with a ranking from 1 (low effectiveness) to 4 (high, typically adsorbs to level of 20% or more of the carbon's weight).

The effective life of activated carbon depends upon the type and quantity of substances to be adsorbed and their dwell time in contact with the activated carbon.

### Important Features

- With activated carbon
- Fast, easy remediation for minor odor problems
- Low resistance
- High dust holding capacity

# Effective Levels of Activated Carbon Adsorption

| Substance | Molecular Weight | Approx Activity |
|---|---|---|
| Methane Series | | |
| Methane | 167.04 | 1 |
| Ethane | 30.07 | 1 |
| Propane | 44.09 | 2 |
| Butane | 58.12 | 2 |
| Pentane | 72.15 | 3 |
| Hexane | 86.17 | 3 |
| Heptane | 86.17 | 3 |
| Heptane | 100.20 | 4 |
| Octane | 114.23 | 4 |
| Nonane | 128.25 | 4 |
| Decane | 142.28 | 4 |
| Acetylene Series | | |
| Acetylene | 26.04 | 1 |
| Propyne | 40.06 | 2 |
| Butyne | 54.09 | 2 |
| Pentyne | 68.11 | 3 |
| Hexyne | 82.14 | |
| 3 | | |
| Ethylene Series | | |
| Ethylene | 28.05 | 1 |
| Propylene | 42.08 | 2 |
| Butylene | 56.10 | 2 |
| Pentylene | 70.13 | 3 |
| Hexylene | 84.16 | 3 |
| Heptylene | 98.18 | 4 |
| Octalene | 112.21 | 4 |
| Benzene Series | | |
| Benzene | 78.11 | 4 |
| Toluene | 92.13 | 4 |
| Xylene | 106.16 | 4 |
| Other substances | | |
| Isoprene | 68.11 | |
| 3 | | |
| Turpentine | 136.23 | 4 |
| Naphthalene | 128.16 | 4 |
| Phenol | 94.11 | 4 |
| Methyl Alcohol | 32.04 | 3 |
| Ethyl Alcohol | 46.07 | 4 |
| Propyl Alcohol | 60.09 | 4 |
| Butyl Alcohol | 74.12 | 4 |
| Amyl Alcohol | 88.15 | 4 |
| Cresol | 108.13 | 4 |
| Menthol | 156.26 | 4 |
| Formaldehyde | 30.03 | 1 |
| Acetaldehyde | 44.05 | 2 |
| Propionaldehyde | 58.09 | 3 |
| Acryladehyde | 56.06 | 3 |
| Butyraldehyde | 72.10 | 4 |
| Valericaldehyde | 86.13 | 4 |
| Crotonaldehyde | 70.09 | 4 |
| Forrmic Acid | 46.03 | 2 |
| Lactic Acid | 90.08 | 3 |
| Acetic Acid | 60.05 | 4 |
| Proplonic Acid | 74.08 | 4 |
| Butyric Acid | 88.10 | 4 |
| Valeric Acid | 102.13 | 4 |
| Acryllic Acid | 76.06 | 4 |
| Capryllic Acid | 144.21 | 4 |
| Pamitic Acid | 256.42 | 4 |
| Methyl Acetate | 74.08 | 3 |
| Ethyl Acetate | 88.10 | 3 |
| Propyl Acetate | 102.13 | 4 |
| Butyl Acetate | 116.16 | 4 |
| Amyl Acetate | 130.18 | 4 |
| Acetone | 58.08 | 3 |
| M.E.K. | 72.10 | 4 |
| Diethyl Ketone | 86.13 | 4 |
| Dipropyl Ketone | 114.18 | 4 |
| Methyl Ether | 46.07 | 3 |
| Ethyl Ether | 74.12 | 3 |
| Propyl Ether | 102.17 | 3 |
| Butyl Ether | 130.23 | 4 |
| Amyl Ether | 158.28 | 4 |
| Methyl Acrylate | 86.09 | 4 |
| Ethyl Acrylate | 100.11 | 4 |
| Methyl Mercaptan | 48.10 | 4 |
| Ethyl Mercaptan | 63.13 | 4 |
| Propyl Mercaptan | 76.15 | 4 |
| Eucalyptol | 154.25 | 4 |
| Camphor | 155.23 | 4 |
| Methyl Chloride | 50.49 | 3 |
| Ethyl Chloride | 64.52 | 4 |
| Propyl Chloride | 78.54 | 4 |
| Butyl Chloride | 92.57 | 4 |
| Methylene Chloride | 84.94 | 4 |
| Chloroform | 119.39 | 4 |
| Carbon Tet. | 153.84 | 4 |
| Iodoform | 393.78 | 4 |
| Phosgene | 98.92 | 4 |
| Pyridine | 79.10 | 4 |
| Indole | 117.14 | 4 |
| Skatole | 131.17 | 4 |
| Nicotine | 162.23 | 4 |
| Nitrobenzene | 123.11 | 4 |
| Urea | 60.06 | 3 |
| Uric Acid | 168.11 | 4 |
| Putrescine | 88.15 | 4 |
| Chlorine | 70.91 | 3 |
| Bromine | 159.83 | 4 |
| Iodine | 253.84 | 4 |
| Hydrogen Fluoride | 20.01 | 1 |
| Hydrogen Chloride | 36.47 | 2 |
| Hydrogen Bromide | 80.92 | 2 |
| Hydrogen Iodide | 127.93 | 2 |
| Nitrogen Dioxide | 46.01 | 2 |
| Nitric Acid | 63.02 | 2 |
| Sulfur Dioxide | 64.08 | 2 |
| Sulfur Trioxide | 80.06 | 3 |
| Sulfuric Acid | 98.08 | 4 |
| Adhesives | | 4 |
| Ammonia | | 2 |
| Asphalt fumes | | 4 |
| Auto Exhaust | | 3 |
| Bathroom smells | | 4 |
| Bleaching Solutions | | 3 |
| Cleaning Compounds | | 4 |
| Cooking Odors | | 4 |
| Hospital Odors | | 4 |
| Household Smells | | 4 |
| Jet Fuel Fumes | | 4 |
| Kitchen Odors | | 4 |
| Mildew | | 3 |
| Mold | | 3 |
| Ozone | | 4 |
| Paint & Redecorating Odors | | 4 |
| Smog | | 4 |
| Stale Odors | | 4 |

Legend:

1. High adsorptive capacity with the substance listed.
   Activity of activated carbon typically will run 20% or more of the activated carbon's weight.
2. Satisfactory adsorptive capacity with substance listed.
   Activity of activated carbon typically will run 10% or more of the activated carbon's weight.
3. Borderline adsorptive capacity with substance listed.
   Activity of activated carbon typically will run 5% or more of the activated carbon's weight.
4. Low adsorptive capacity with substance listed.
   Activity of activated carbon will typically run less than 5% of the activated carbon's weight.

Flanders®
FOREMOST IN AIR FILTRATION

# FCP Carbon Pleat

## *Activated Carbon Adsorbers*

***Model #: FCP***

***Bulletin: PB1204-1206***



### FCP Series – Activated Carbon Filled Nonwoven Media Adsorbers

The Flanders FCP Series adsorbers are designed for removal of malodorous compounds at low concentration levels. Utilizing the latest technology in fine mesh activated carbon, the product provides high removal efficiency of nuisance odors.

### Product Design

FCP Series filters are pleated activated carbon filled nonwoven media sealed within a moisture resistant beverage board frame. The uniqueness of the product is the filter media. The polyester media is filled with fine mesh activated carbon through the depth of the media. The ultrapure carbon is thermally bonded to the polyester fibers providing superior product design and offering the following advantages.

- Maximum Carbon Surface Area
  - Optimizes Efficiency and Available Capacity
- Exceptional Adhesion of Granules
  - Precludes Carbon Dusting
- Consistent Carbon Distribution
  - Reduces Channeling
- Minimizes Pressure Loss

### FCP Performance

The FCP products offer exceptional performance in efficiency and capacity compared with products manufactured from carbon slurry media or carbon/polyester pads. Figure 1 on the reverse side illustrates that the FCP efficiency is at least 30% better than a carbon slurry pleat. The minimum capacity is six times greater as shown in the table below.

### Options

The FCP Series is available in standard capacity and high capacity models in 2” and 4” depths.

**300 Series - High Capacity**

The filter media has a carbon mass loading of 14 oz. per sq. yd. of material.

The FCP Series is available with three contaminant specific activated carbon products.

301 - Removal of VOC’s

302 - Removal of Acid Gases

304 - Removal of Alkaline Gases

*This table illustrates the differences in overall capacity of three carbon products.*

| Product | Capacity to75% Breakthrough |
|---|---|
| Carbon Slurry | 1.6 grams |
| FCP 200 Series | 25 grams |
| FCP 300 Series | 63 grams |

## FCP Selection

| Model Number | Nominal Size (inches) | Actual Size (inches) | Media Area (sq. ft.) | Rated Flow (cfm) | Initial Resistance (inch w.g.) |
|---|---|---|---|---|---|
| FCP201-24242 | 24 x 24 x 2 | 23-3/8 x 23-3/8 x 1-3/4 | 20 | 2000 | .55 |
| FCP201-12242 | 12 x 24 x 2 | 11-3/8 x 23-3/8 x 1-3/4 | 10 | 1000 | .55 |
| FCP301-24242 | 24 x 24 x 2 | 23-3/8 x 23-3/8 x 1-3/4 | 20 | 2000 | .65 |
| FCP301-12242 | 12 x 24 x 2 | 11-3/8 x 23-3/8 x 1-3/4 | 10 | 1000 | .65 |
| FCP201-24244 | 24 x 24 x 4 | 23-3/8 x 23-3/8 x 3-3/4 | 44 | 2000 | .40 |
| FCP201-12244 | 12 x 24 x 4 | 11-3/8 x 23-3/8 x 3-3/4 | 21 | 1000 | .40 |
| FCP301-24244 | 24 x 24 x 4 | 23-3/8 x 23-3/8 x 3-3/4 | 44 | 2000 | .50 |
| FCP301-12244 | 12 x 24 x 4 | 11-3/8 x 23-3/8 x 3-3/4 | 21 | 1000 | .50 |

Values shown may be averages or estimates typical of product styles.
Contact factory for test data on specific models.

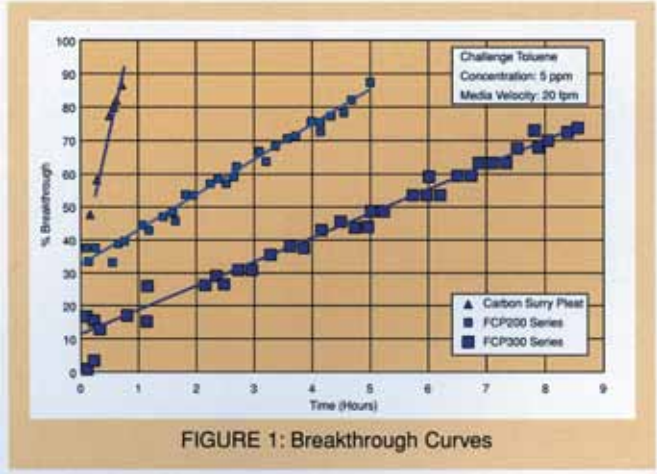


FIGURE 1: Breakthrough Curves



## Guide Specifications

***1.0 General***

1.1 Activated carbon filters shall be FCP Carbon adsorbers as manufactured by Flanders.

1.2 Model numbers, sizes and capacities shall be as specified on the drawings.

***2.0 Construction***

2.1 Filters shall be constructed of a carbon filled polyester nonwoven media. Carbon granules shall be thermally bonded to polyester fibers to prevent release of carbon particulate into the air stream.

2.2 The carbon granules shall be 30 x 50 US Mesh with a carbon tetrachloride rating of 90%.

2.3 The carbon media shall be pleated without the use of a support structure and sealed within a 22 point moisture resistant beverage board frame.

***3.0 Performance***

3.1 The pressure drop and carbon content shall be as specified on the drawings.

3.2 The filter shall be capable of removing toluene at an efficiency of 90% at inlet concentration of 10 ppm and a filter face velocity of 500 fpm

Flanders®
FOREMOST IN AIR FILTRATION

# Model C

## *Disposable Granular Carbon Gas Phase Odor Control Filters*

***Model #: C50***

***Bulletin: PB1203-1104***



### General

The Model C Disposable Carbon air filter is an easy-to-install partial-bypass carbon type air purifier for light duty IAQ applications in home and commercial recirculated air systems. The filter uses premium grade granular virgin coconut shell carbon to remove odors by the adsorption process rather than masking them with air fresheners. Odors are controlled by surface adsorption on the carbon, which has over one million square feet of surface area per square foot of filter face area. Typical household applications are the removal of odors from bathrooms, cooking, smoking and entertaining. Commercial applications may include restaurants, schools, medical offices, beauty salons, health clubs, and offices.

### Construction

A laminated cellulose honeycomb material forms the base structure of the filter. The honeycomb provides for the exposure of a great amount of surface area for full utilization of the carbon. Each individual honeycomb cell is filled with granular activated carbon to either the 50% or 75% level. The 75% fill filter has a longer life than the 50% fill filter, but its airway pressure drop is greater.

The carbon is retained within the honeycomb cells by a non-woven nylon mesh on both sides of the filter. The honeycomb is given additional strength by a moisture-resistant die-cut beverage board frame (standard sizes) or U-channel beverage board (special sizes). Each order is individually sealed in plastic to retain the carbon efficiency prior to installation.

### Service Life

It is difficult to predict the life of any carbon filter. It is a function of the concentration level of dust and gaseous contamination for each specific application. Even though sensitivity varies with the individual, the human nose is still the best indicator of the need to change a carbon filter.

### Physical Data

**Frame:** Moisture-resistant die-cut beverage board

**Honeycomb:** Laminated cellulose paper

**Mesh Grid:** Non-woven nylon

**Activated Carbon:** Granular virgin coconut shell base

### Important Features

- Low static pressure partial-bypass type odor adsorber
- Premium virgin coconut shell activated carbon
- Completely disposable product
- Controls odors in many light duty applications

| Standard Size Capacities and Dimensions | | | | |
|---|---|---|---|---|
| Actual Depth (in.) | Actual HxW (in.) | Nominal cfm at 300 fpm | Carbon weight (lbs.) per filter | |
| | | | C50 | C75 |
| 3/4 | 11-1/2 x 23-1/2 | 600 | 2.00 | 2.75 |
| | 15-1/2 x 19-1/2 | 660 | 2.25 | 3.00 |
| | 15-1/2 x 24-1/2 | 830 | 2.75 | 3.75 |
| | 19-1/2 x 19-1/2 | 830 | 2.75 | 3.75 |
| | 19-1/2 x 24-1/2 | 1040 | 3.25 | 4.75 |
| | 23-1/2 x 23-1/2 | 1200 | 4.00 | 5.50 |
| 1-3/4 | 11-1/2 x 23-1/2 | 600 | 4.00 | 5.50 |
| | 15-1/2 x 19-1/2 | 660 | 4.50 | 6.00 |
| | 15-1/2 x 24-1/2 | 830 | 5.50 | 7.50 |
| | 19-1/2 x 19-1/2 | 830 | 5.50 | 7.50 |
| | 19-1/2 x 24-1/2 | 1040 | 6.50 | 9.50 |
| | 23-1/2 x 23-1/2 | 1200 | 8.00 | 11.00 |

## Installation

The Model C carbon filter can be installed with, or in some cases, instead of an existing dust filter. If the filter track is 2 in. thick, it is often possible to slide in a 1 in. prefilter and a 1 in. carbon filter.

Built-up filter banks with holding frames are particularly easy to retrofit using Model P fasteners. Model C carbon filters are ideal for use in the prefilter track of the 2 stage Sureseal filter housing.

Notes:

1. Special size Model C filters are available. Contact your local representative or the factory.
2. Recommended maximum rated velocity is 500 fpm.
3. Pressure drop for clean Model C filters at 300 fpm face velocity is:
   C50-1in., .30 w.g. C50-2 in., .25 w.g.
   C75-1in., .35 w.g. C75-2 in., .30 w.g.

## Guide Specifications

***1.0 General***

1.1 Disposable carbon air filters shall be Model C as manufactured by Flanders.

***2.0 Filter Construction***

2.1 Filters shall be constructed of laminated cellulose paper honeycomb whose cells are partially filled with granular virgin coconut shell base activated carbon.

2.2 Fill level shall be 50% or 75% as specified.

2.3 Carbon shall be retained by a non-woven nylon mesh.

2.4 Filter frame shall be die-cut or U-Channel moisture-resistant beverage board.

2.5 Each order shall be sealed in plastic to retain carbon efficiency prior to installation.

***3.0 Carbon Fill***

3.1 The minimum pounds of carbon per square foot of filter face area shall be not less than:

C50-1 in. 0.80, C50-2 in. 1.75
C75-1 in. 1.13, C75-2 in. 2.50

Flanders®
FOREMOST IN AIR FILTRATION

# Super-Flow® VC

## *Disposable Carbon Adsorber*

***Model #: SFVC***

***Bulletin: PB1206-0507***



### General

Flanders Super-Flow® VC Disposable Activated Carbon Adsorbers are designed for gaseous contamination control in both new and existing HVAC systems. Super-Flow® VC Adsorbers have total-detention capability with all air passing through the carbon beds. These adsorbers can help mitigate Indoor Air Quality problems in buildings where the air must be cleansed of gaseous contaminants. They are also useful in a variety of other applications such as the protection of light industrial processes and works of art.

### Construction

Super-Flow® VC Adsorbers consist of eight activated carbon-filled panels arranged in a V configuration and sealed with non-volatile adhesive into top and bottom injection molded ABS plastic end plates. The sealant completely eliminates bypass within the cell. The end plates incorporate a single header to position the cell in holding frames or side access housings.

Extruded aluminum vertical struts close off the panel edges in front and are aerodynamically designed to minimize airflow restriction and turbulence. Vertical steel rods on the downstream side provide rigidity and minimize twisting and racking.

The activated carbon panels are constructed of one” (25 mm) thick moisture-resistant corrugated kraft honeycomb grids. The honeycomb is filled with granular activated carbon held in place by fine mesh nylon screens glued to the grid. The screens act as a secondary prefilter and also as an afterfilter. The activated carbon media is premium HVAC grade virgin coconut shell granules with a minimum carbon tetrachloride (CTC) activity of 60% per ASTM D-3467. Granules are 4 x 8 US mesh size with a minimum apparent density of 0.49 g/mL. The minimum hardness is 97 per ASTM D-3802 and the minimum surface area is 1100 m2/g by the N2 BET test method.

### Physical Data

**Top and bottom end plates:** High strength ABS plastic

**Vertical struts:** Aerodynamically-designed extruded aluminum

**Vertical supports:** Steel rods on downstream side

**Carbon panels:** Eight one inch (25 mm) moisture resistant corrugated kraft honeycomb grids filled with granular activated carbon media contained by fine mesh nylon screens on both air entering and leaving sides

**Panel sealant:** Non-volatile type applied along the entire periphery of the panel to eliminate air by-pass

**Activated carbon media:** Virgin coconut shell base,4 x 8 US mesh size, minimum 60% CTC activity

**Operating limits:** 150°F (65°C) and 95% RH, non-condensing

### Important Features

- Total detention multi-panel design combines high adsorption efficiency with low pressure drop
- Entire cell is disposable so installation is clean, quick and easy
- Installation flexibility: adsorbers are suitable for both initial and retrofit applications and in front or side access arrangements.
- Gaseous contamination control can be applied to most HVAC air systems
- Impregnated carbons are available for control of difficult contaminants: H2S, acid gases, formaldehyde, ammonia, aldehydes and amines

## Adsorber Protection

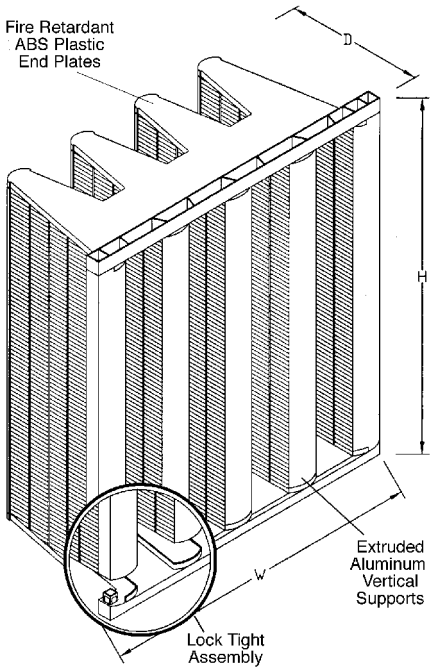
Particulate contamination must be considered when utilizing gas/vapor phase adsorbers. As a minimum, a Flanders prefilter with an efficiency of 25-30% per ASHRAE Std. 52.1 should be installed on the upstream side of the Super-Flow® VC adsorber in order to extend the service life by significantly reducing dirt build-up. Even higher efficiency prefiltration should be considered when system design allows for additional space and static pressure.

## Packaging

Each Super-Flow® VC Adsorber is individually sealed in a polyethylene bag prior to placement in a heavy duty shipping carton. The bag protects the adsorber from being expended prematurely and also facilitates clean and easy jobsite changeouts. The spent adsorber can be placed in the plastic bag and then in the carton for disposal.

## Disposal

Routine disposal is usually permitted if spent adsorbers with Super-Flow® VC 201 media have been used for normal IAQ applications. Spent adsorbers filled with impregnated carbon and those used in industrial applications may need special handling. Local environmental authorities should be consulted prior to disposal.




## Options:

- Super-Flow® VC “Light” with 75% fill.
- Box style full metal wrap
- Double header
- Downstream dusting sack

## Application Considerations

Super-Flow® VC Adsorbers in HVAC airstreams can remove many gaseous contaminants thus mitigating their effects on people and processes. They are especially useful in controlling common contaminants that cause poor indoor air quality (IAQ) in commercial and industrial buildings such as office buildings and hospitals.Typical applications and controlled contaminants are:

| | |
|---|---|
| ***Airports*** | ***SOx and NOx*** |
| ***Blueprint facilities*** | ***Ammonia*** |
| ***Food processing*** | ***Amines*** |
| ***Loading docks*** | ***Diesel fumes*** |
| ***Museums*** | ***Aldehydes and acid gases*** |
| ***Office buildings*** | ***VOCs and aldehydes*** |
| ***Research facilities*** | ***Animal odors*** |

Light duty IAQ applications can usually be handled by Super-Flow® VC units selected at 500 fpm (2.54 m/s) face velocity with a 0.030 second residence time. Medium and heavy duty applications include airports, engine exhaust, some industrial processes and situations requiring impregnated carbon. For these applications, adsorbers should be selected at greatly reduced face velocities for a longer residence time.

## Residence Time

Residence time is the period, usually a fraction of a second, that the contaminant molecule is within the boundaries of the media bed depth and is exposed to adsorption capture and (for chemisorption) chemical change. The efficiency of an adsorber is a function of the bed residence time for a given contaminant and set of environmental conditions. The longer the residence time, the greater the efficiency. Residence time is computed as: (bed area exposed to airflow x bed depth) airflow rate.

## Installation

Super-Flow® VC Adsorbers are not position sensitive. Airflow may be through the header side face or the opposite side face. The cell may be turned so that the panels are vertical or horizontal. Wherever possible, adsorbers should be installed with panels vertical and air entering the header side face.

## Super-Flow®VC Performance Data

| Adsorber Model Number (See Note 1) | Nominal Size H x W x D inch (See Note 2) | ADSORBER FACE VELOCITY, fpm | | | | | | | | | | | | Cell Weight lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 125 | | | 250 | | | 375 | | | 500 | | | |
| | | cfm | PD | Res | cfm | PD | Res | cfm | PD | Res | cfm | PD | Res | |
| SFVC-242412 | 24 x 24 x 12 | 500 | 0.10 | 0.11 | 1000 | 0.20 | 0.050 | 1500 | 0.33 | 0.040 | 2000 | 0.50 | 0.030 | 34 |
| SFVC-122412 | 12 x 24 x 12 | 250 | 0.10 | 0.11 | 500 | 0.20 | 0.050 | 750 | 0.33 | 0.040 | 1000 | 0.50 | 0.030 | 17 |
| Adsorber Model Number (See Note 1) | Nominal Size H x W x D mm. (See Note 2) | ADSORBER FACE VELOCITY, m/s | | | | | | | | | | | | Cell Weight kg |
| | | 0.64 | | | 1.27 | | | 1.90 | | | 2.54 | | | |
| | | $m^3/s$ | PD | Res | $m^3/s$ | PD | Res | $m^3/s$ | PD | Res | $m^3/s$ | PD | Res | |
| SFVC-242412 | 610 x 610 x 305 | 0.24 | 0.02 | 0.11 | 0.47 | 0.05 | 0.050 | 0.71 | 0.08 | 0.040 | 0.94 | 0.12 | 0.033 | 15.5 |
| SFVC-122412 | 305 x 610 x 305 | 0.12 | 0.02 | 0.11 | 0.24 | 0.05 | 0.050 | 0.35 | 0.08 | 0.040 | 0.47 | 0.12 | 0.033 | 7.7 |

Notes:

1. *Insert Super-Flow® VC carbon type model number.
2. Actual size of adsorber header is 0.625” (16 mm) under on face height and width; actual adsorber depth is 11.5” (290 mm).
3. “PD” represents clean pressure drop in inch w.g. or kPa. Values shown may be averages or estimates typical of product styles. Contact factory for test data on specific models.
4. “Res” represents residence time in seconds.

### Super-Flow®VC Carbon Weight Per Cell

| Adsorber Size Designator | Superflow-VC Carbon Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 201 | | 202 | | 204 | | 205 | | 209 | |
| | lb | kg | lb | kg | lb | kg | lb | kg | lb | kg |
| 242412 | 25 | 11.4 | 29 | 13.1 | 28 | 12.6 | 29 | 13.1 | 33 | 14.9 |
| 122412 | 13 | 5.9 | 14 | 6.3 | 14 | 6.3 | 14 | 6.3 | 16 | 7.2 |

Frames and housings used for 12” (3**05 mm) deep particulate filters are well-suited for Super-Flow®VC adsorbers. In new construction, built up banks of Flanders PF-1 Holding Frames and Clips or Flanders K-Trac Framing Modules holding prefilters and adsorbers are often chosen where 30 inches (760 mm) of upstream service access space is available. Flanders Sureseal Side Access Housings are most often used for small systems and for systems where in-line service access space is limited.**

**PF-1 Holding Frames include gaskets on the flange against which the adsorber header seals. For side access housing applications, gaskets are applied to the side of the adsorber header to achieve an adsorber-to-adsorber and adsorber-to-door seals.**

### Carbon Type and Typical Applications

(Weights are per 24 x 24 adsorber)

TS 201- Virgin coconut shell- VOC (volatile organic compounds) Carbon weight = 25 lb/11.4 kg

TS 202- Impregnated for control of acid and malodorous gas absorption Carbon weight = 29 lb/13.1 kg

TS 204- Impregnated for control of ammonia and light organic amines adsorption Carbon weight = 28 lb/12.6 kg

TS 205- Impregnated for control of aldehydes Carbon weight = 29 lb/13.1 kg

TS 209- Impregnated for universal adsorption of both acid and alkaline gases and vapors Carbon weight= 32 lb/14.9 kg

*Refer to Super-Flow® VC Drawing for construction details.*

## Model Number Development

| SFVC | TS201 | 242412 |
|---|---|---|
| Super-Flow® VC | Carbon Type | Nominal Size |

**SFVC-TS201-242412**

Represents a Superflow VC Carbon Adsorber with Type 201 carbon, nominal 24" x 24" x 12" (610 mm x 610 mm x 305 mm) with polyfoam gasket material shipped loose.

## Guide Specifications

***1.0 Products***

1.1 Activated carbon adsorbers shall be total-detention type Super-Flow® VC models as manufactured by Flanders.

1.2 Model numbers and capacities of the adsorbers, particulate prefilters and holding frames or housings shall be as specified or as shown on the drawings.

***2.0 Construction***

2.1 Adsorbers shall be constructed of multiple carbon-filled panels arranged in a V configuration. Panels shall be 1" (25 mm) thick moisture-resistant corrugated kraft honeycomb sealed to top and bottom end plates with non-volatile adhesive.

2.2 Panels shall be completely filled with 4 x 8 US mesh size activated carbon held in place by nylon screens.

2.3 Top and bottom end plates shall be injection-molded high strength ABS plastic with integral headers.

2.4 The cell shall be assembled with aerodynamically designed vertical front struts and vertical steel rod supports on the downstream side.

2.5 Each adsorber shall be sealed in a polyethylene bag before being placed in its shipping carton.

***3.0 Performance***

3.1 Activated carbon media shall be virgin coconut shell base, minimum 60% CTC activity by the ASTM D-3467 test method, minimum apparent density of 0.49 g/mL, minimum hardness of 97 by the ASTM D-3802 method and a minimum surface area of 1100m2/g by the N2 BET method.

3.2 The SFVC201-242412 model shall contain no less than 25 lb (11.4 kg) of activated carbon. At 2000 cfm (0.94 m3/s) it shall have an airway resistance no greater than 0.50 inch w.g. (0.12 kPa) and a residence time no less than 0.030 seconds.

# HMZD

## *High Mass and Zero Dust Bonded Carbon Panels*

***Model #: HMZD***

***Bulletin: PB1212-1106***



### Clean air is only a block away.

Flanders, through its innovation, has resolved the problems associated with loose filled activated carbon filters and introduces HMZD bonded carbon panels.

HMZD stands for High Mass and Zero Dust. High mass refers to the greater density of activated carbon installed and zero dust means that the filters will not release carbon dust into the air stream. The panels are fabricated from 100% virgin coconut shell activated carbon with a minimum 60% CTC activity. The premium grade carbon is bonded together during a sintering process to form a rigid block and framed to provide clean air.

HMZD panels are replaced right at the air handling unit with the same quality 100% virgin carbon as the initial installation. Loose filled tray systems are typically replaced with regenerated carbon minimizing adsorption performance.

### Superior performance:

The HMZD panels provide superior adsorption performance because there is no settling within the carbon bed. The carbon granules are bonded together to provide a uniform density of sorbent media across the panel eliminating air bypass and stratification zones for high efficiency and extended service life. The panel design creates uniform air flow distribution and uniform residence time ensuring maximum removal efficiencies.

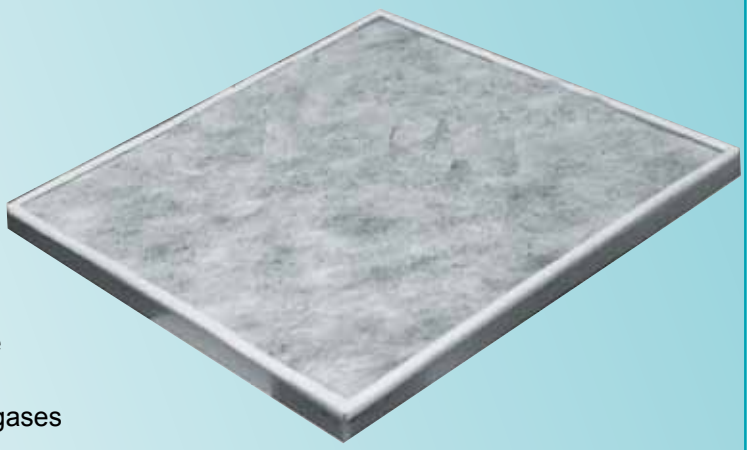
### Cleaning the air

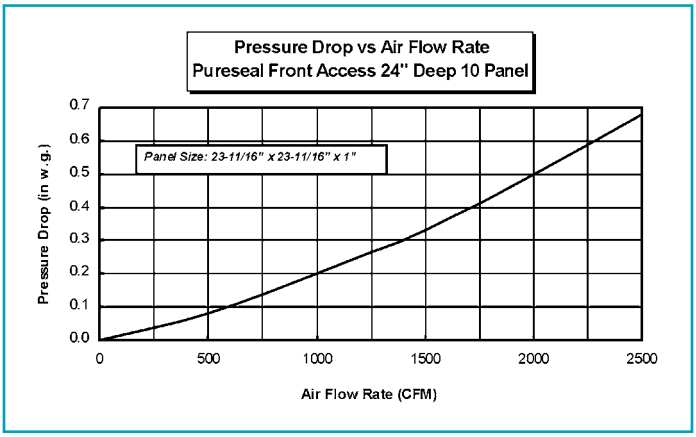
The uniform air velocity through the bed eliminates high velocity zones and bed fluidization. Bed fluidization is a major cause of continuous dusting in loose granular system designs. HMZD panels clean the air. No after filters are required.

### Carbon Usages

Activated carbon is highly effective on many gas phase contaminants:

- Adhesives
- Alcohols
- Animal odors
- Asphalt fumes
- Auto exhaust
- Body odors
- Charred Materials
- Sour milks
- Turpentine
- Waste products
- Cleaning odors
- Cosmetics
- Jet engine exhaust
- Fertilizers
- Fish odors
- Kitchen odors
- Stale odors
- Vinegar
- Liquor odors
- Mold
- Moth balls
- Onion odors
- Ozone
- Paint fumes
- Sewer odors
- Tobacco smoke
- Vinyl chloride
- Many process gases

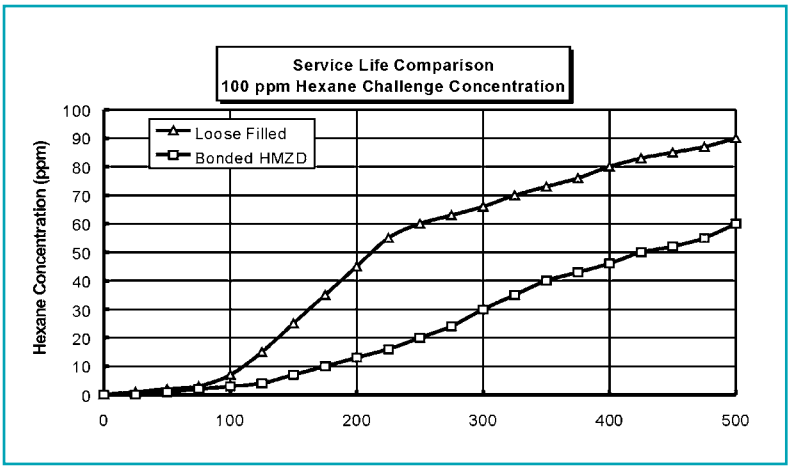





## Pressure Drop

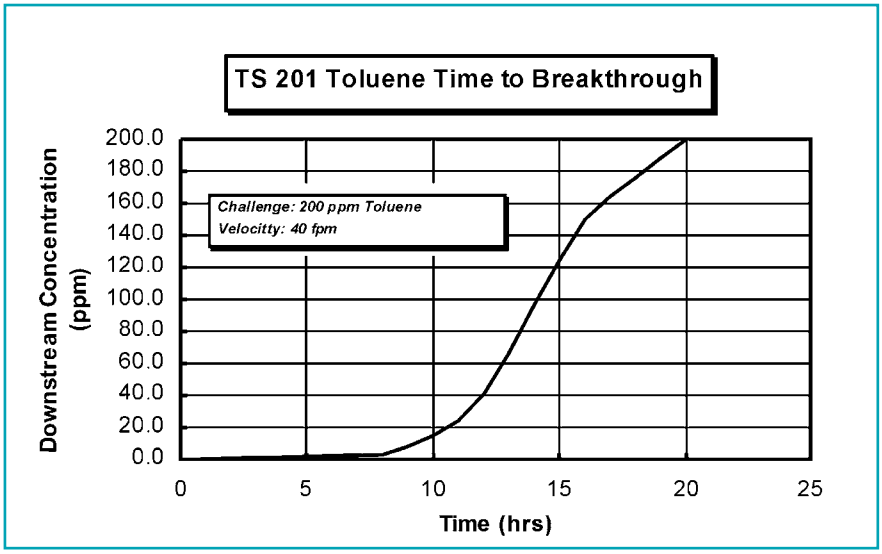
HMZD Panels can be incorporated into V shaped configurations with minimal pressure drop and impact on the system.

Please note that the breakthrough test was based on continuous 100 ppm Hexane challenge concentration. Testing conducted at an independent lab on virgin coconut shell carbon.




## Efficiency

HMZD panels perform better than loose filled systems due to increased density of carbon and elimination of air bypass




## Carbon Selection

In general, contaminants with a boiling point greater than 100 C can be effectively removed with carbon type 201.

Contaminants with a boiling point below 100 C require other available types of impregnated carbon such as type 202, 204, 205, 209.

## Retrofitting existing loose trays:

HMZD panels are available from 3/8" to 3" thick and are easily installed into any existing side or front access carbon housing without any mess from carbon dusting. The labor required to transport to a remote area and refill trays is eliminated with bonded panels and high initial efficiency is maintained with replacement panels composed of 100% virgin carbon as opposed to utilizing regenerated carbon.

## Providing clean air:

HMZD carbon panels are suitable for solving complex Indoor Air Quality problems within museums, schools, airports, semiconductor manufacturing plants, waste water treatment facilities and hospitals. A carbon solution is available for removing the application specific contaminants.

## Carbon selection:

HMZD carbon panels can be manufactured from virgin carbon, where contaminant removal is accomplished by physical adsorption or from impregnated virgin carbon where contaminant removal by chemical adsorption mechanisms are required.

## HMZD Carbon Types and Applications:

- 201- Impregnate is virgin coconut shell carbon for general removal of VOC's
- 202- Caustic impregnated for removal of acid gases
- 204- Acid impregnated for removal of alkaline gases
- 205- Chromate impregnated for removal of amines
- 209- Universal impregnate for removal of acid and alkaline gases.
- 225- Proprietary blend for airports & helipads

## Guide Specifications

***1.0 General***

1.1 Molecular contamination control filters shall be Flanders High Mass and Zero Dust (HMZD) bonded carbonpanels. Panels shall be self-supported bonded granular carbon and be sized to fit into the selected Flanders Pureseal front or side access housing as well as competitive carbon systems. Model numbers shall be as per schedule for application specific requirements.

***2.0 References***

2.1 ASTM test method D 3467-88, Standard Method for Carbon Tetrachloride Activated, American Society for Testing and Materials, Philadelphia, 1988.

***3.0 Construction***

3.1 The granular carbon shall be bonded together in a briquette form so that the panel contains no loose carbon; loose filled tray type systems are not permitted.

3.2 Panels shall be covered on both sides with a white spun bonded polyester scrim and framed in a galvanized (or stainless steel) channel; plastic frames are not permitted. A black poly-butyl (or silicone) gasket shall be affixed to one side of the panel frame for front access designs.

3.3 The bonded carbon configuration shall not settle, shall not particulate and shall not allow channeling through the bed.

3.4 The bonded panels shall be self-supporting and when installed in the housing shall provide a continuous seal around its periphery.

***4.0 Packaging***

4.1 The panels shall be individually sealed into a polyethylene bag prior to being boxed. Filters shall be stacked on pallets and stretch wrapped.

***5.0 Carbon Material***

5.1 The panels shall be composed of virgin coconut shell granular activated carbon with a minimum carbon tetrachloride (CTC) activity of 60% per ASTM D-3437. The granular carbon shall be 4x8 US mesh size with an apparent density of 0.49 g/ml minimum. The minimum hardness shall be 97 per ASTM D 3802. The minimum surface area shall be 1100 m2/g (N2BET Method) and the moisture content shall not exceed 5%.

5.2 The carbon shall be Flanders Tech Sorb TS (carbon type model number) as designed for the removal of (contaminant). The contaminant removal capacity shall be (x%) by weight as (challenge).

| Tech Sorb # | Capacity | Challenge |
|---|---|---|
| 201 | 24% | butane |
| 202 | 20% | hydrogen sulfide |
| 204 | 10% | ammonia |
| 205 | 5% | formaldehyde |
| 209 | 12% | hydrogen sulfide |

The mass of carbon in the filter shall be (x)grams/ft2

| Tech Sorb # | 1“ | 3/4” | 5/8” | 7/16” |
|---|---|---|---|---|
| 201 | 2.6 | 1.9 | 1.6 | 1.1 |
| 202 | 2.9 | 2.2 | 1.8 | 1.3 |
| 204 | 3.7 | 2.8 | 2.3 | 1.6 |
| 205 | 3.0 | 2.2 | 1.9 | 1.3 |
| 209 | 2.8 | 2.1 | 1.8 | 1.2 |

Flanders®
FOREMOST IN AIR FILTRATION

# Alpha 95

## *95% DOP Filter*

***Model #: Contact Factory***

***Bulletin: PB1400-0408***

### General

Flanders Alpha 95 filters are designed for use in HVAC applications requiring cleaner air than is possible with ASHRAE rated filters, but where HEPA filtered air is not required. The filters are rated at 95% efficiency on 0.30 micrometer particles by the DOP test method. The Alpha 95 is rated MERV 17 per ASHRAE Standard 52.2.

Alpha 95 filters are identical in design and construction to the Alpha Cell HEPA filters except that the media is 95% efficient on 0.30 micrometer particles.

### Installation Considerations

Alpha 95 filters should be installed in Flanders leak tight Alpha HEPA frames or Surelock Side Access HEPA Housings on the positive-pressure side of the system fan to prevent air bypass. Sureaire diffuser sections, air mixing baffles or long transitions should be used if the bank is close to the fan.

Installation of Flanders ASHRAE efficiency pre-filters upstream of the fan is recommended to ensure economical Alpha 95 filter life.

Standard Alpha 95 filters have 1.7 times the cfm capacity of standard Alpha Cell 99.97% DOP HEPA filters at the same clean pressure drop. They are normally rated at 500 fpm so that filter banks with 95% DOP filters can be sized the same as ASHRAE-rated filter banks.

Typical applications for Alpha 95 include:

- Hospitals
- Biomedical
- Pharmaceutical
- Biotechnology
- Genetic Research
- Universities
- Laboratories
- Food Processing
- Photo Processing
- Semiconductor Fabrication
- Industrial Processing Systems Product



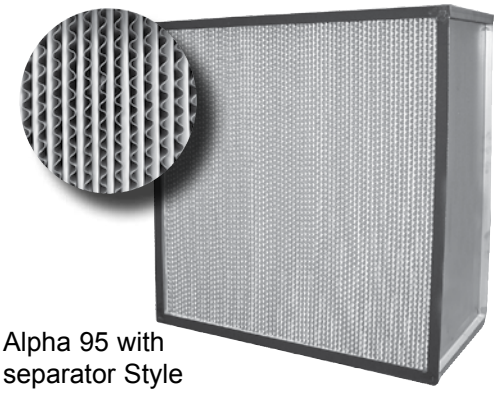
### Important Features

- Minimum efficiency is 95% on 0.30 micrometer particles.
- Manufactured in a variety of wood and metal frame types.
- Available with a media pack with aluminum separators or with a separatorless pack.
- Available in a variety of sizes with either a gasket or gel seal.
- MERV 14

| CFM CAPACITIES AND DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|
| Frame Depth (Inches) | Filter Size & Frame Depth Designator | Actual Face Size (inches) | cfm Capacity at Clean Pressure Drop inches w.g. | | | Weight (Lb.) |
| | | | .65 | 1.0 | 1.35 | |
| 11-1/2 | GG-F | 24 x 24 | 1375 | 2000 | 2560 | 38 |
| | GC-F | 24 x 12 | 650 | 920 | 1180 | 26 |
| | YY-F | 23-3/8 x23-3/8 | 1350 | 1900 | 2450 | 37 |
| | YU-F | 23-3/8 x11-3/8 | 610 | 865 | 1150 | 25 |
| | GN-F | 24 x 30 | 1750 | 2550 | 3250 | 45 |
| | CC-F | 12 x 12 | 290 | 430 | 550 | 14 |

## Construction

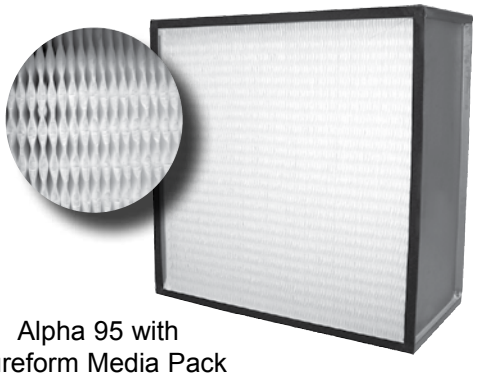
Flanders manufactures both conventional Separator Style and Pureform Separatorless 95 DOP filters. To make a Separator Style filter, the media is folded over corrugated aluminum separators with hemmed edges to separate the pleats in the filter pack. Flanders manufactures its own filter media, enabling it to develop a unique manufacturing process for the production of Pureform Separatorless 95% DOP filters. In one manufacturing operation, Flanders produces a self-supporting and self-separating Pureform Media Pack.



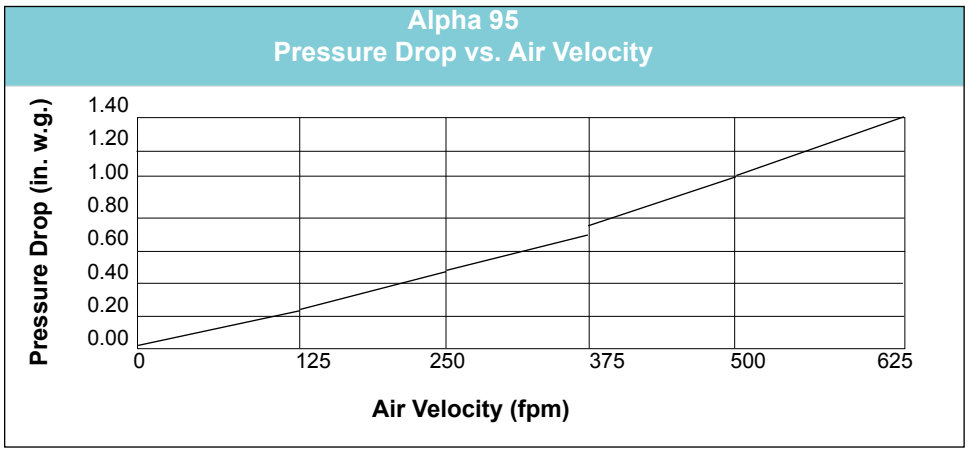
Alpha 95 with separator Style Media Pack

The Pureform filter offers many advantages over conventional Separator Style 95% DOP Filters:

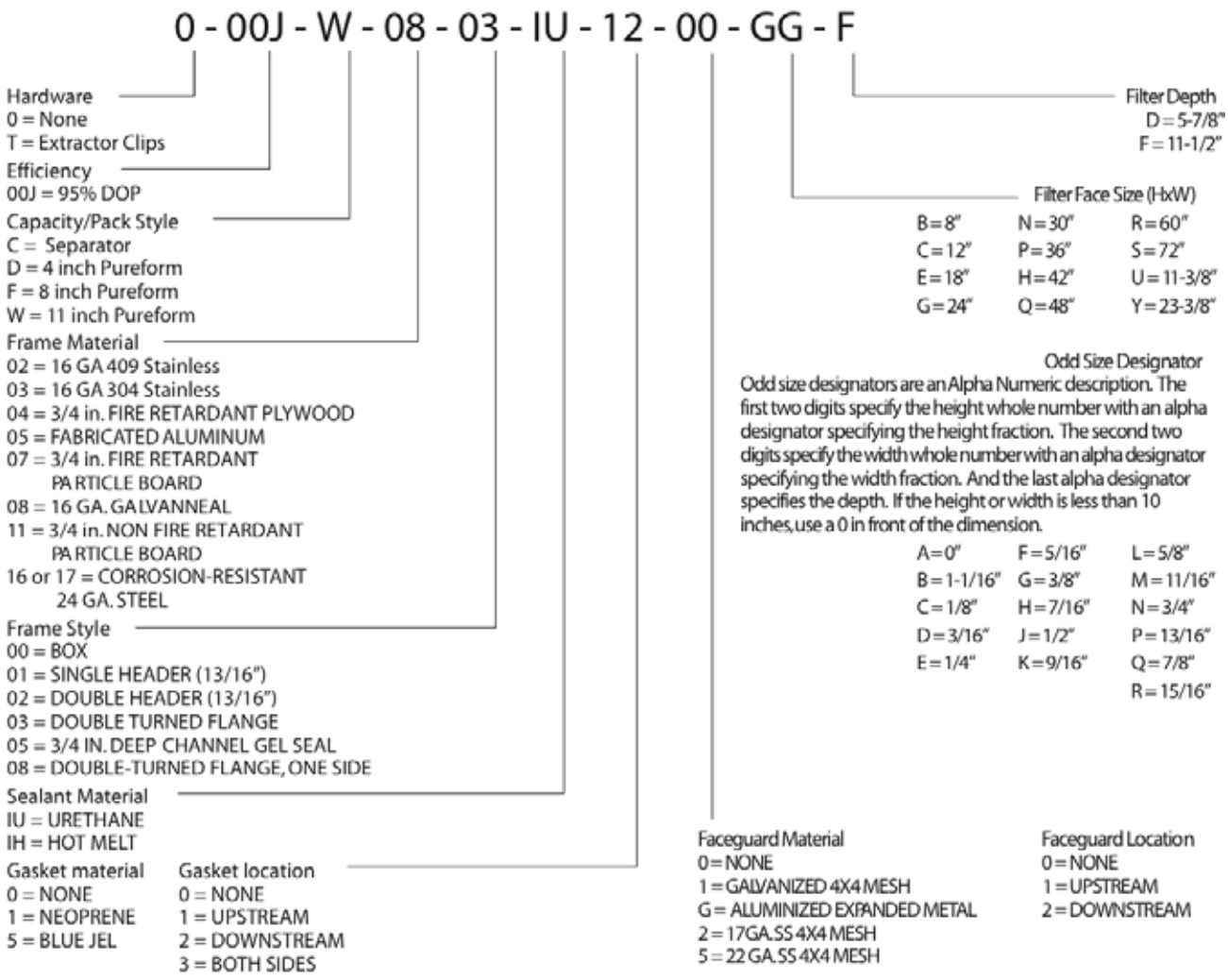
- Increased usable media area affords longer service life and higher dust holding capacity
- Maximum utilization of the media
- Can handle some harsh environments which may attack aluminum separators
- Media pack can be incinerated
- Media is 28 mils, significantly thicker than conventional media used in Separator Style 95 DOP filter (15 mil)
- Pureform has 25% more media area than conventional style.
- Ideal for heavy loading applications such as oil mist.



Alpha 95 with Pureform Media Pack



# ALPHA 95 COMPONENT CHART






**Frame:** Alpha 95 filters are available in a variety of wood and metal frame materials such as particle board, plywood, galvanized steel and stainless steel. Alpha 95 filters are also available in 24 gauge corrosion resistant steel in single or double headers for installation in side access or plenum applications.

**Seal:** The standard gasket seal is 0.75" x 0.25" neoprene for installation on either the upstream, downstream or both sides of the filter. The standard Fluid Seal is Flanders Blu-Jel® Seal which is a two-part silicone material suitable for temperatures up to 390°F.

**Faceguards:** 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 faceguards are also available.

**UL:** Alpha 95 filters are either UL 900 Class 1 or Class 2 listed depending on materials of construction.

**Banks:** Alpha Frames are designed for Alpha 95 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 or C-3 gasket seal and Surelock C-4 for Blu Jel 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.

## Guide Specificawtions

***1.0 General***

1.1 Alpha 95 filters shall be extended media (separator type) (Pureform separatorless type) filters as manufactured by Flanders.

1.2 Filter sizes, capacities and construction options shall be as scheduled on the drawings.

1.3 Filters shall be (UL 900 Class 1)( UL 900 Class 2) listed.

***2.0 Filter Construction***

2.1 The filter pack shall be constructed by pleating a continuous sheet of non-woven water-resistant fiberglass media around hemmed-edge corrugated aluminum separators. The filter pack shall be constructed by pleating a continuous sheet of formed, corrugated medium so that the pack is self-supporting without the use of spacers of any kind, including separators, tape strings, adhesives or strips of media.

2.2 The filter pack shall be sealed into a (galvaneal) (409 stainless steel) (304 stainless steel) (particleboard) (fire retardant particleboard) (fire retardant plywood) frame with a fire retardant (polyurethane foam) (solid urethane) sealant. (Steel frames shall be 16 ga.) (Wood frames shall be 3/4" thick.)

2.3 (A 40-durometer closed-cell neoprene gasket) (Silicone gel in a channel) shall be provided on one or more sides to seal the filter in the mounting device.

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 The rated minimum efficiency of 95% on 0.3 micrometer size particles shall be as determined by the DOP Test Method

Flanders®
FOREMOST IN AIR FILTRATION

# Alpha Cell

## *Standard Capacity HEPA Filters*

***Model #: Contact Factory***

***Bulletin: PB1401-0508***

### General

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 either UL 900 Class 1 or Class 2 listed.

### Testing

Flanders individually tests and certifies each Alpha Cell HEPA Filter to meet the customer's requirements for resistance and efficiency (penetration) at the filters 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, Flanders Alpha Cell HEPA Filters will easily pass an in-place validation test to determine the overall system efficiency.

### 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 PSL (Polystyrene Latex Spheres). 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.

### Higher Efficiency ULPA Filters

Flanders can provide Pureform® and Separator Style ULPA Filters with efficiencies up to 99.9995% on 0.12 micrometer size particles. Please contact the factory for more information.

**Typical applications for Alpha Cell Filters include:**

- Hospitals
- Biomedical
- Pharmaceutical
- Biotechnology
- Genetic Research
- Universities
- Laboratories
- Food Processing
- Photo Processing
- Semiconductor Fabrication
- Industrial Processing Systems

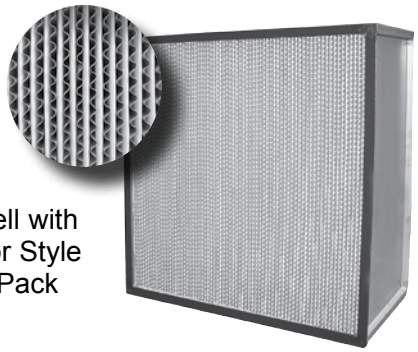
# Alpha Cell HEPA Filter Dimensions and Capacities

## CFM Dimensions and Capacities

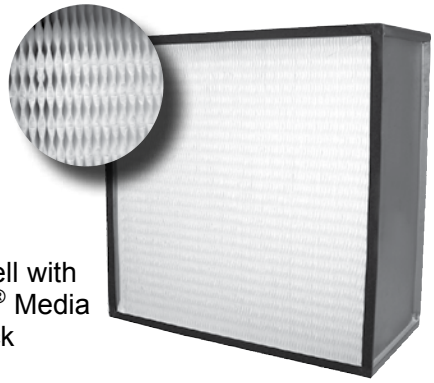
| Frame Depth (Inches) | Filter Size and Frame Depth Designator | Actual Face Size (inches) | CFM Capacity at Clean Pressure Drop, inches w.g. | | | Weight (LB.) |
|---|---|---|---|---|---|---|
| | | | .65 | 1.0 | 1.35 | |
| 11-1/2 | GG-F | 24x24 | 650 | 1000 | 1300 | 38 |
| | GC-F | 24x12 | 300 | 455 | 590 | 26 |
| | YY-F | 23-3/8 x 23-3/8 | 615 | 945 | 1235 | 37 |
| | YU-F | 23-3/8 x 11-3/8 | 275 | 425 | 550 | 25 |
| | GN-F | 24x30 | 830 | 1275 | 1655 | 45 |
| | CC-F | 12x12 | 135 | 205 | 265 | 14 |
| 5-7/8 | GG-D | 24x24 | 325 | 500 | 650 | 20 |
| | GC-D | 24x12 | 145 | 225 | 295 | 12 |
| | BB-D | 8x8 | 25 | 35 | 45 | 6 |
| | CC-D | 12x12 | 70 | 105 | 135 | 9 |
| | YY-D | 23-3/8 x 23-3/8 | 305 | 470 | 610 | 18 |
| | YU-D | 23-3/8x11-3/8 | 270 | 215 | 540 | 23 |
| | GN-D | 24x30 | 410 | 635 | 825 | 26 |
| | GP-D | 24x36 | 505 | 775 | 1010 | 33 |
| | GQ-D | 24x48 | 680 | 1045 | 1360 | 39 |
| | GR-D | 24x60 | 860 | 1320 | 1715 | 32 |
| | GS-D | 24x72 | 1035 | 1590 | 2065 | 46 |
| | NN-D | 30x30 | 525 | 810 | 1055 | 26 |
| | NP-D | 30x36 | 640 | 985 | 1280 | 30 |
| | NQ-D | 30x48 | 865 | 1330 | 1730 | 37 |
| | NR-D | 30x60 | 1090 | 1680 | 2185 | 44 |
| | NS-D | 30x72 | 1315 | 2025 | 2630 | 52 |
| | PP-D | 36x36 | 790 | 1215 | 1580 | 33 |
| | PQ-D | 36x48 | 1050 | 1620 | 2105 | 41 |
| | PR-D | 36x60 | 1315 | 2025 | 2630 | 49 |
| | PS-D | 36x72 | 1580 | 2430 | 3160 | 59 |

Flanders manufactures both conventional Separator Style and Pureform® Separatorless HEPA Filters. To make a Separator Style filter, the media is folded over corrugated aluminum separators with hemmed edges to separate the pleats in the filter pack. Flanders manufactures its own filter media, enabling it to develop a unique manufacturing process for the production of Pureform® Separatorless HEPA Filters. In one manufacturing operation, Flanders produces a self-supporting and self-separating Pureform® Media Pack. The Pureform® Filter offers many advantages over conventional Separator Style HEPA Filters:

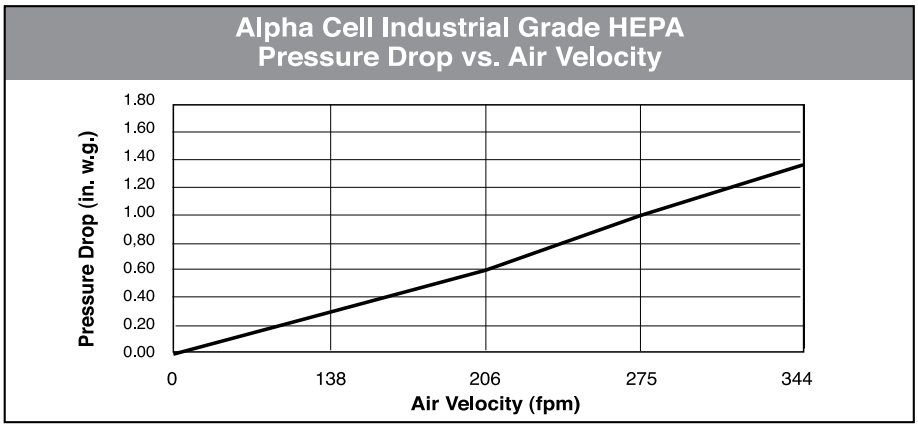
- More usable media area for longer service life because of higher dust holding capacity
- Reduced cost of ownership because of longer service life
- Maximum utilization of the media
- Can handle some harsh environments which may attack aluminum separators
- Media pack can be incinerated
- Pureform® media is 28 mils thick, which is significantly thicker than conventional 15 mil media used in Separator Style HEPA Filter



Alpha Cell with Separator Style Media Pack



Alpha Cell with Pureform® Media Pack




## Guide Specifications

***1.0 General***

1.1 Alpha Cell HEPA filters shall be extended media (separator type) (Pureform® separatorless type) filters as manufactured by Flanders.

1.2 Filter sizes, capacities and construction options shall be as scheduled on the drawings.

1.3 Filters shall be (UL Class 900) (UL586)(UL 900 Class 1) or (UL 900 Class 2), depending on frame material.

***2.0 Filter Construction***

2.1a The Pureform® filter pack shall be constructed by pleating a continuous sheet of formed, corrugated medium so that the pack is self-supporting without the use of spacers of any kind, including separators, tape strings, adhesives or strips of media.

2.1b The separator style filter pack shall be constructed by pleating a continuous sheet of non-woven, water-resistant fiberglass media around hemmed-edge corrugated aluminum separators.

2.2 The filter pack shall be sealed into a (galvaneal) 409 stainless steel) (304 stainless steel) (particle board) (fire-retardant particleboard) (fire-retardant plywood) frame with a fire retardant(polyurethane foam) (solid urethane) sealant. (Steel frames shall be 16 ga.)(Wood frames shall be 3/4" thick.)2.3 (A 40-durometer closed-cell neoprene gasket) (Silicone jel in a channel) shall be provided on one or more sides to seal the filter in the mounting device.

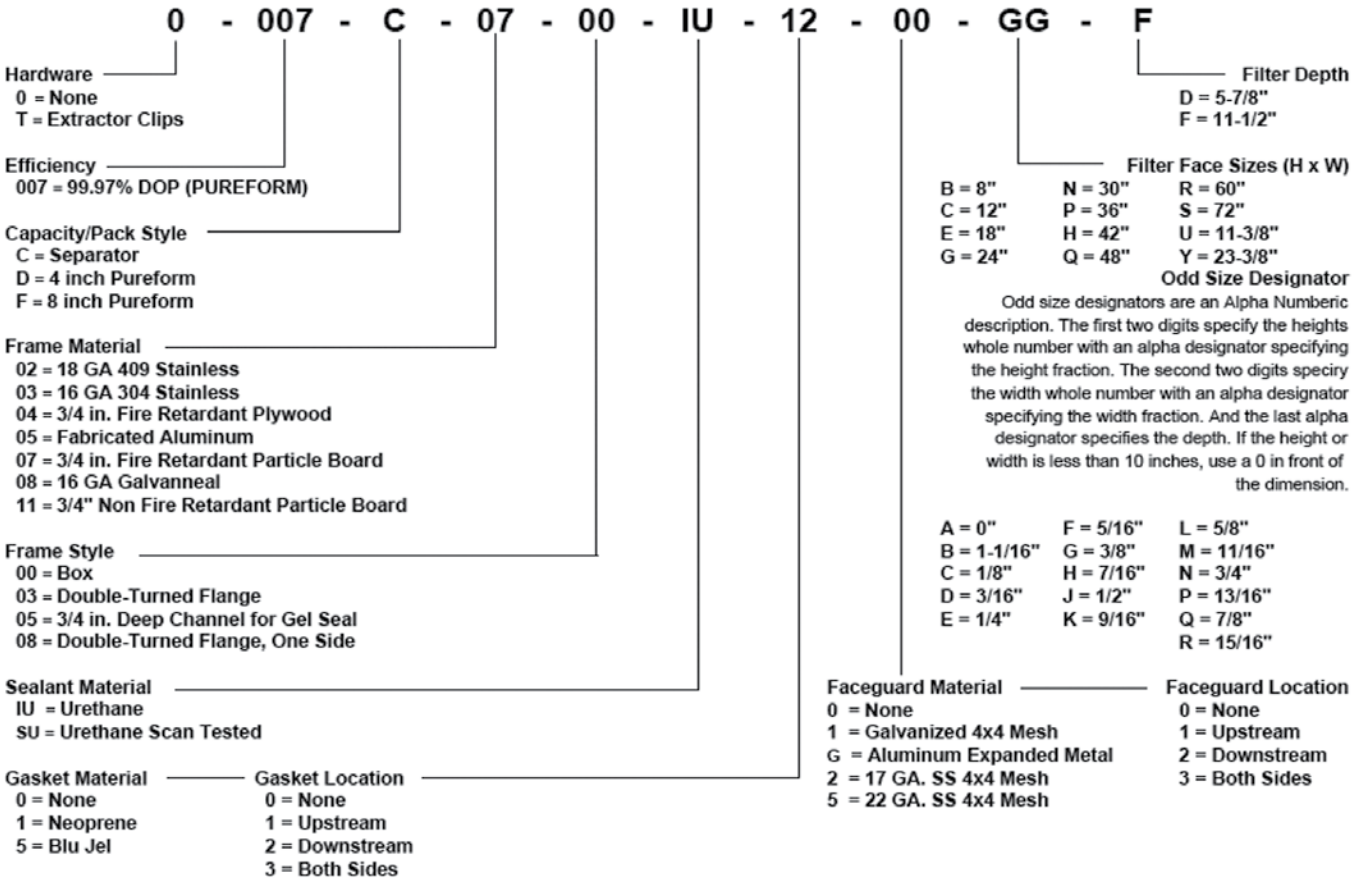
***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Alpha Cell HEPA Filters shall have a minimum efficiency of 99.97% on 0.30 micrometer particles when tested at rated capacity on a Q-107 Penetrometer in accordance with IEST-RP-CC-001.3, Type A. Each filter shall be challenged with an approved nearly monodispersed oil aerosol of 0.30 micrometer size. Measure the upstream and down stream concentration of these particles with a light scattering photometer, determine the penetration and calculate the efficiency.

3.3 Alpha Cell Scan Tested HEPA Filters shall have a minimum efficiency of 99.99% on 0.30 micrometer particles in accordance with IEST-RP-CC-001.3, Type C. Scan Testing shall be in accordance with Section 6.2 of IEST-RP-CC034.1 Type C. The scan test shall consist of challenging the filter with a high concentration of an approved oil aerosol or PSL Spheres. Utilizing a photometer or particle counter, the media pack and the pack- to- frame seal shall be scanned to insure that there are no leaks greater than .01% of the upstream concentration at 100 fpm face velocity.

## ALPHA CELL COMPONENT CHART




### Frame Materials

AlphaCell 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 0.75” x 0.25” neoprene for installation on either the upstream, downstream or both sides of the filter. The standard Fluid Seal is Flanders Blu-Jel® 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 faceguards are also available.

### UL Listings

Alpha Cell Filters are either UL900 Class 1 or Class 2 listed depending on materials of construction.

### Holding Frames and Housings

Alpha Frames are designed for Alpha 95 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.

Flanders®
FOREMOST IN AIR FILTRATION

# Alpha 2000

## *High Capacity HEPA Filters*

***Model #: Contact Factory***

***Bulletin: PB1402-0508***

### High Capacity Design

The Alpha 2000 High Capacity HEPA filter is available in a nominal 12" depth configuration. It is designed for optimum performance and low operating costs in both new and replacement systems. The Alpha 2000 saves space, energy, and material and labor costs with 40% more media area than the standard capacity Alpha Cell filter.

### Save Space

Alpha 2000 HEPA filters operate at 500 fpm (2000 cfm for a 24" x 24" size) at 1.35 inch w.g. clean pressure drop versus conventional Alpha Cell filters that operate at 250 fpm and .80 inch w.g. clean pressure drop.

### Construction

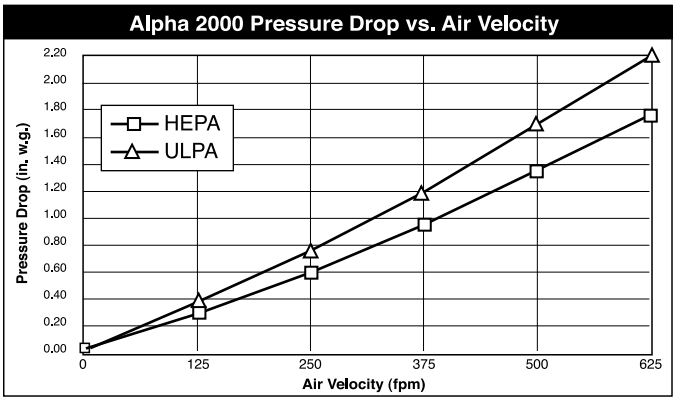
A popular construction option consists of 16 ga. galvaneal frames and moisture-resistant microfine wet-laid fiberglass media folded over hemmed-edge low amplitude corrugated aluminum separators. The filter pack is bonded to the frame by a fire-retardant urethane elastomer to provide a rigid leak-free assembly.

### Save Energy

Alpha 2000 filters in a conventional HEPA filter bank impose a lighter load on the fan when operated at conventional 250 fpm velocities during the life of the filters. The Alpha 2000 99.97% and 99.99% high capacity 24" X 24" X 11.5" filter has a clean pressure drop of 1.0 inch w.g. at 1500 cfm, compared to standard Alpha Cell filters with a clean pressure drop of 1.50 inch w.g. at the same air flow.

### Save Replacement Material and Labor Costs

Savings are significant with high capacity Alpha 2000 filters. They operate at lower velocities and provide life cycles up to three times the life of standard capacity filters. Savings are achieved in replacement materials and labor costs as a result of fewer filters.

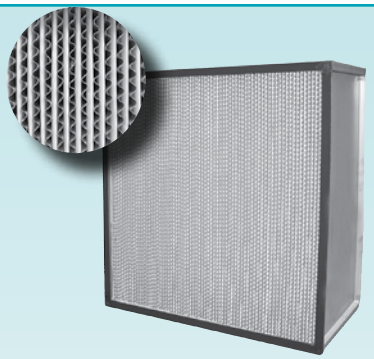



### Important Features

- Efficiencies are 99.97% and 99.99% on 0.30 and 99.9995% on 0.12 micrometer particles.
- High capacity Alpha 2000 filters can reduce the filter bank size
- Corrugated aluminum separators stabilize the moisture-resistant media pack (separator style)
- Available as a separatorless media filter with a self-supporting media pack (*Pureform)
- Available in a variety of frame materials in gasket or fluid seal design.

## Separator or Separatorless

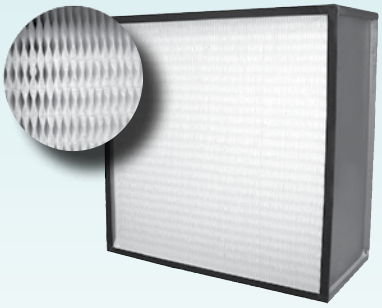
Flanders manufactures both conventional Separator Style and Pureform Separatorless HEPA Filters. To make a Separator Style filter, the media is folded over corrugated aluminum separators with hemmed edges to separate the pleats in the filter pack. Flanders manufactures its own filter media, enabling it to develop a unique manufacturing process for the production of Pureform Separatorless HEPA Filters. In one manufacturing operation, Flanders produces a self-supporting and self-separating Pureform Media Pack.



Alpha 2000 with Separator Style Media Pack

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 some harsh environments which may attack aluminum separators
- Media pack can be incinerated
- Media is 28 mils thick, which is significantly thicker than conventional 15 mil media used in Separator Style HEPA Filters



Alpha 2000 with Pureform Media Pack

### Alpha 2000 HEPA Filter Dimensions and Capacities

| Filter Depth (inches) | Filter Size and Frame Depth Designator | Actual Face Size (Inches) | CFM Capacity at Clean Pressure Drop, Inches w.g. .95 | 1.35 | 1.75 | Weight (lbs) |
|---|---|---|---|---|---|---|
| 11-1/2 | GG-F | 24x24 | 1500 | 2000 | 2500 | 38 |
| | GC-F | 24x12 | 650 | 920 | 1180 | 26 |
| | YY-F | 23-3/8x23-3/8 | 1350 | 1900 | 2450 | 37 |
| | YUF | 23-3/8x11-3/8 | 610 | 865 | 1150 | 25 |
| | GN-F | 24x30 | 1750 | 2550 | 3250 | 45 |
| | CC-F` | 12x12 | 290 | 430 | 550 | 14 |

NOTE: The pressure drop for fluid seal (Separator or Pureform) and scan tested Pureform filters will be approximately 15% higher.

## Guide Specifications

***1.0 General***

1.1 Alpha 2000 HEPA filters shall be extended media (separator type) (Pureform separatorless type) filters as manufactured by Flanders.

1.2 Filter sizes, capacities and construction options shall be as scheduled on the drawings.

1.3 Filters shall be (UL 900 Class 1)(UL586) listed.

***2.0 Filter Construction***

2.1 The filter pack shall be constructed by pleating a continuous sheet of non-woven water-resistant fiberglass media around hemmed-edge corrugated aluminum separators. (or) The filter pack shall be constructed by pleating a continuous sheet of formed, corrugated medium so that the pack is self-supporting without the use of spacers of any kind, including separators, tape strings, adhesives or strips of media.

2.2 The filter pack shall be sealed into a (galvaneal) 409 stainless steel) (304 stainless steel) (particle board) (fire-retardant particleboard) (fire-retardant plywood) frame with a fire retardant(polyurethane foam) ( solid urethane) sealant. (Steel frames shall be 16 ga.) (Wood frames shall be 3/4" thick.)

2.3 (A 40-durometer closed-cell neoprene gasket) (Silicone jel in a channel) shall be provided on one or more sides to seal the filter in the mounting device.

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Alpha 2000 HEPA Filters shall have a minimum efficiency of 99.97% on 0.30 micrometer particles when tested at rated capacity on a Q-107 Penetrometer in accordance with IEST-RP-CC-001.3, Type A. Measure the upstream and down stream concentration of these particles with a light scattering photometer, determine the penetration and calculate the efficiency.

3.3 Alpha 2000 Scan Tested HEPA Filters shall have a minimum efficiency of 99.99% on 0.30 micrometer particles in accordance with IEST-RP-CC-001.3, Type C. The scan test shall consist of challenging the filter with a high concentration of an approved oil aerosol or PSL Spheres. Utilizing a photometer or particle counter, the media pack and the pack-to- frame seal shall be scanned to insure that there are no leaks greater than .01% of the upstream concentration at 100 fpm face velocity

# ALPHA 2000 COMPONENT CHART

## 0 - 007 - W - 07 - 00 - IU - 12 - 00 - GG - F

**Hardware**
0 = None
T = Extractor Clips

**Efficiency**
007 = 99.97% DOP (PUREFORM)
011 = 99.97% DOP (SEPARATOR STYLE)
99.99% on .30 micrometers = SU Sealant

**Capacity/Pack Style**
H = SEPARATOR
W = 11 in. PUREFORM

**Frame Material**
02 = 16 GA 409 STAINLESS
03 = 16 GA 304 STAINLESS
04 = 3/4 in. FIRE RETARDANT PLYWOOD
05 - FABRICATED ALUMINUM
07 - 3/4 in. FIRE RETARDANT PARTICLE BOARD
08 = 16 GA. GALVANNEAL
11 = 3/4 in. NON FIRE RETARDANT PARTICLE BOARD

**Frame Style**
00 = BOX
03 = DOUBLE-TURNED FLANGE
05 = 3/4 in. DEEP CHANNEL
08 = DOUBLE-TURNED FLANGE, ONE SIDE

**Sealant Material**
IU = URETHANE
SU = URETHANE SCAN TESTED = (99 99% on 0 30 micrometers)

**Gasket Material**
0 = NONE
1 = NEOPRENE
5 = BLUE JEL

**Gasket Location**
0 = NONE
1 = UPSTREAM
2 = DOWNSTREAM
3 - BOTH SIDES

**Filter Depth**
D = 5-7/8”
F = 11-1/2”

**Filter Face Size (H x W)**

| | | |
|---|---|---|
| B = 8” | N = 30” | R = 6 |
| C=12” | P = 36” | S = 72” |
| E = 18” | H = 42” | U = 11-3/8” |
| G = 24” | Q = 48” | Y = 23-3/8 |

**Odd Size Designator**

Odd size designators are an Alpha Numeric description. The first two digits specify the height whole number with an alpha designator specifying the height fraction. The second two digits specify the width whole number with an alpha designator specifying the width fraction. And the last alpha designator specifies the depth. If the height or width is less than 10 inches, use a 0 in front of the dimension.

| | | |
|---|---|---|
| A = 0” | F = 5/16” | L = 5/8” |
| B = 1-1/16” | G = 3/8” | M = 11/16” |
| C = 1/8” | H = 7/16” | N = 3/4” |
| D = 3/16” | J = 1/2” | P = 13/16” |
| E = 1/4” | K = 9/16” | Q = 7/8” |
| | | R = 15/16” |

**Faceguard Material**
0 = NONE
1 = GALVANIZED 4X4 MESH
G = ALUMINIZED EXPANDED METAL
2 = 17 GA. SS 4X4 MESH
5 = 22 GA. SS 4X4 MESH

**Faceguard Location**
0 = NONE
1 = UPSTREAM
2 = DOWNSTREAM
3 = BOTH SIDES

**Frame Materials:** Alpha 2000 Filters are available in a variety of wood and metal frame materials such as particle board, plywood, galvanized steel and stainless steel.

**Gasket and Fluid Seal:** The standard gasket seal is 0.75” x 0.25” neoprene for installation on either the upstream, downstream or both sides of the filter. The standard Fluid Seal is Flanders Blu-Jel® 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 are also available.

**Underwriters Laboratories Qualification:** Alpha 2000 Filters are either UL900 Class 1 or Class 2 listed depending on materials of construction.

UL 900 Class 1 — Flanders HEPA Filters are UL 900 Class 1 rated except those filters manufactured with non-fire-retardant wood frames. Upon request, the filter will have a stamp indicating compliance with UL 900 Class 1.

UL 586 — UL 586 is typically required for Nuclear Grade HEPA Filters. Many of the Flanders non-Nuclear HEPA Filters meet the requirements of UL 586. To be listed under UL 586, filters must be submitted to Underwriters Laboratories for extensive testing including spot flame and environmental exposure to heated air. Upon request, a numbered UL 586 label certifying that the filter meets Standard 586 can be applied to the filter (maximum size is 24” x 30”).

**Banks:** Alpha Frames are designed for Alpha 2000 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 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.

Flanders®
FOREMOST IN AIR FILTRATION

# Alpha HT

## *High Temperature HEPA Filters*

***Model #: Contact Factory***

***Bulletin: PB1403-0604***

## General

Flanders manufactures metal-frame separator-style HEPA filters for applications with high-temperature requirements up to 1,000°F (540°C) for exhaust air only and 500°F (260°C) for supply air. High-temperature filters are available with either a gasket or fluid seal. Filters with Blu-Jel® Fluid Seal have a maximum service temperature of 390°F (199°C)

## HEPA Filters

Each 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. Each filter is challenged with an approved nearly monodispersed oil aerosol of 0.30 micrometer size and 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 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 Filters Leak Tests. In the scan test, the filter is challenged with a high concentration of an approved oil aerosol or PSL (Polystyrene Latex Spheres). The media pack and pack-to-frame seal is scanned using a photometer or particle counter to insure that there are no leaks greater than .01% of the upstream concentration at 100 fpm face velocity. Scan testing is only available for the 500°F model.

## Sealant Types

Two types of sealants for high-temperature HEPA filters are offered.

***Silicone Sealant***

This is a high temperature (RTV) silastic-sealant silicone compound rated for continuous service up to 500°F(260°C). NOTE: This high-temperature sealant is not UL 586 approved.

***Glass Pack Sealant For Exhaust Air Only***

The glass pack seal is rated for continuous service up to 1,000°F(540°C) in exhaust air applications only. It is a mat of submicron glass fibers that creates a seal when compressed between the filter pack and filter frame. The glass packing is not an adhesive seal but a mechanical seal that functions much as the glass fiber medium of the filter itself.

NOTE: Due to the possibility that the glass pack may shed glass fibers, the glass pack sealant should be used for exhaust systems only.

Alpha HT Filter Dimensions and Capacities

| CFM CAPACITIES AND DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|
| **Filter Depth (Inches)** | **Filter Size and Frame Depth Designator** | **Actual Face Size (Inches)** | **CFM Capacity at Clean Pressure Drop, Inches w.g.** | | | **Weight (Lb.)** |
| | | | **.65** | **1.0** | **1.35** | |
| 11-1/2 | GG-F | 24x24 | 650 | 1000 | 1300 | 38 |
| | GC-F | 24x12 | 300 | 455 | 590 | 26 |
| | YY-F` | 23-3/8x23-3/8 | 615 | 945 | 1235 | 37 |
| | YU-F | 23-3/8x11-3/8 | 275 | 425 | 550 | 25 |
| | GN-F | 24x30 | 830 | 1275 | 1655 | 45 |
| | CC-F | 12x12 | 135 | 205 | 265 | 14 |

# ALPHA HT COMPONENT CHART

## 0 - 007 - C - 02 - 03 - IE - 32 - 00 - GG - F

**Hardware**
0 = None
T = Extractor Clips

**Efficiency**
007 = 99.97% DOP (PUREFORM)
99.99% on .30 micrometers = SU Sealant

**Capacity/Pack Style**
C = SEPARATOR

**Frame Material**
02 = 16 GA 409 STAINLESS
03 = 16 GA 304 STAINLESS

**Frame Style**
03 = DOUBLE-TURNED FLANGE
05 = 3/4 in. DEEP CHANNEL

**Sealant Material**
IE = HIGH TEMPERATURE SILICONE
IG = CERAMIC AND GLASS MAT
SE = HIGH TEMPERATURE SILICONE SCAN TESTED (99.99% on 0.30 micrometers)

**Gasket Material**
0 = NONE
3 = SILICONE SPONGE
4 = WOVEN GLASS
5 = BLU JEL

**Gasket Location**
0 = NONE
1 = UPSTREAM
2 = DOWNSTREAM
3 - BOTH SIDES

**Filter Depth**
D = 5-7/8"
F = 11-1/2"

**Filter Face Size (H x W)**

| | | |
|---|---|---|
| B = 8" | N = 30" | R = 6 |
| C=12" | P = 36" | S = 72" |
| E = 18" | H = 42" | U = 11-3/8" |
| G = 24" | Q = 48" | Y = 23-3/8 |

**Odd Size Designator**

Odd size designators are an Alpha Numeric description. The first two digits specify the height whole number with an alpha designator specifying the height fraction. The second two digits specify the width whole number with an alpha designator specifying the width fraction. And the last alpha designator specifies the depth. If the height or width is less than 10 inches, use a 0 in front of the dimension.

| | | |
|---|---|---|
| A = 0" | F = 5/16" | L = 5/8" |
| B = 1-1/16" | G = 3/8" | M = 11/16" |
| C = 1/8" | H = 7/16" | N = 3/4" |
| D = 3/16" | J = 1/2" | P = 13/16" |
| E = 1/4" | K = 9/16" | Q = 7/8" |
| | | R = 15/16" |

**Faceguard Material**
0 = NONE
G = ALUMINIZED EXPANDED METAL
5 = 22 GA. SS 4X4 MESH

**Faceguard Location**
0 = NONE
1 = UPSTREAM
2 = DOWNSTREAM
3 = BOTH SIDES

## Guide Specifications

***1.0 General***

1.1 High temperature separator style HEPA filters shall be Alpha HT models as manufactured by Flanders.

1.2 Filter sizes, capacities and construction options shall be as scheduled on the drawings.

***2.0 Filter Construction***

2.1 The filter pack shall be constructed by pleating a continuous sheet of non-woven water-resistant fiberglass media around hemmed-edge corrugated aluminum separators.

2.2 The filter pack shall be sealed into a (409 stainless steel) (304 stainless steel) frame with a high temperature silicone sealant rated for 500°F or a glass pack sealant rated for 1,000°F in exhaust applications.

2.3 (A chlorastic silicone gasket) (a woven glass gasket) shall be provided to seal the filter in the mounting device (Gasket Seal). A silicone gel shall be provided in a channel on one side to seal the filter in the mounting device. filters with silicone gel have a maximum service temperature of 390°F (Gel Seal)

***3.0 Performance***

3.1 Initial and final resistances shall not exceed the scheduled values.

3.2 Alpha HT HEPA Filters shall have a minimum efficiency of 99.97% on 0.30 micrometer particles when tested at rated capacity on a Q-107 Penetrometer in accordance with IEST-RP-CC-001.3, Type A. Each filter shall be challenged with an approved nearly monodispersed oil aerosol of 0.30 micrometer size. Measure the upstream and downstream concentration of these particles with a light scattering photometer, determine the penetration and calculate the efficiency.

3.3 Alpha HT Scan Tested HEPA Filters shall have a minimum efficiency of 99.99% on0.30micrometer particles when tested at rated capacity on a Q-107 Penetrometer in accordance with IEST-RP-CC-001.3, Type C. The scan test shall consist of challenging the filter with a high concentration of an approved oil aerosol or PSL Spheres. Utilizing a photometer or particle counter, the media pack and the pack-to-frame seal shall be scanned to insure that there are no leak greater than .01% of the upstream concentration at 100 fpm face velocity.

Flanders®
FOREMOST IN AIR FILTRATION

# Super-Flow® 24

High Velocity - Low Airflow Resistance HEPA Filter

***Model #: Contact Factory***

***Bulletin: PB1404-1106***

**General**

Flanders Super-Flow®24 is a V-bed HEPA filter (99.99% at 0.30 micrometer) specifically designed for high airflow applications requiring HEPA efficiency at an ultra low-pressure drop. The Super-Flow®24 can be incorporated into systems with air velocities of 600 fpm and a pressure drop of 1.0-inch w.g.

**Product Design**

The Super-Flow®24 filters are manufactured with wet laid microfine fiberglass media. The media is formed into a minipleat utilizing a hot melt separator and arranged in a V-bed configuration. There are twelve individual minipleat packs sealed on all four sides to the frame with two-component polyurethane.

The frame is constructed of 20 ga. galvaneal, aluminum or stainless steel and consists of vertical support struts of the same material. Vertical supports are attached to the frame body without the use of mechanical fasteners. The vertical supports act as the sealing surface of the mini pleat packs.

**Product Options**

The Super-Flow®24 are available in aluminum, galvaneal or stainless steel frames and with gasket seal or gel seal design. The Super-Flow®24 filters are UL Class 900 listed.

- **Gasket Seal**
  The filter gasket is 1/4" x 3/4" black neoprene attached to the frame with an adhesive and the gasket joints are dovetailed to ensure no penetration of particulate due to the gasket. The filter is designed for installation into Flanders front load B-1 holding frame, C-3 Gasket Seal Housing and Surelock-B Side Access Housing.
- **Gel Seal**
  The filter gasket is Flanders Blu Jel® filled into a channel around the perimeter of the frame. The gel seal design provides the highest degree of sealing integrity between the filter and holding device. The filter is designed for installation into Flanders front load A-4 holding frame or C-4 Gel Seal Housings.

**Important Features**

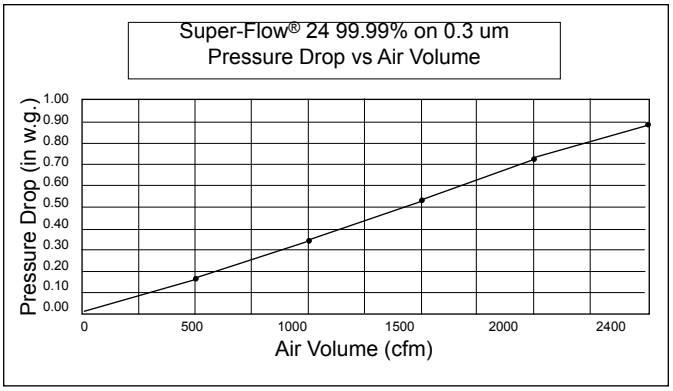
The product offers the following advantages over conventional HEPA filters.

- **Longer Life**
  Gasket seal Super-Flow®24 filters have 400 sq. ft. of media compared to 240 sq. ft. for traditional HEPA filters. The greater media area provides a longer time period between filter replacements.
- **Improved Efficiency**
  The significant quantity of media translates into an extremely low media velocity. Therefore a minimum overall efficiency of 99.99% at 0.30 µm is easily assured. Traditional HEPA filters have an overall efficiency of 99.97% at 0.30 µm.
- **Lower Operating Cost**
  The typical HEPA filter pressure drop can range from 1.4-inch w.g. to 1.8-inch w.g. at the rated flow. The pressure drop of the Super-Flow®24 is 1.0-inch w.g. at the rated flow.

**Performance Data Notes:**

The Super-Flow®24 filters offer HEPA efficiency at an ultra low-pressure drop for HVAC systems supplying air to critical areas.

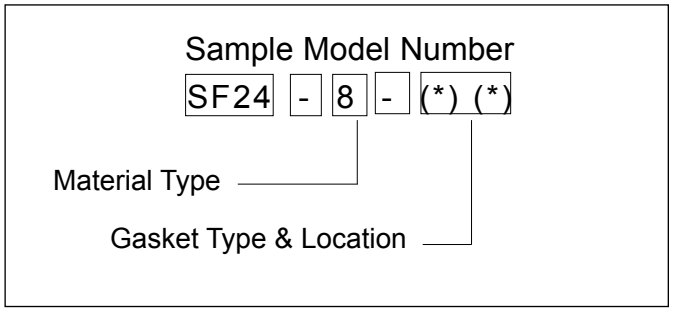
Figure 1 illustrates the Super-Flow®24 pressure drop as a function of airflow rate for gasket seal and gel seal designs.




### Installation Considerations

All products have a rated overall efficiency of 99.99% at 0.30 µm and a maximum pressure drop of 1.0-inch w.g. at the rated flow. Specify the following:

| | |
|---|---|
| Material Types: | 8 = Galvaneal<br>5 = Aluminum<br>3 = Stainless Steel |
| Gasket Types: | G = Neoprene<br>F = Blu Jel® |
| Gasket Locations: | 1 = Upstream<br>2 = Downstream |




| Model Number | Nominal Size | Actual Size | Media Area | Rated Flow |
|---|---|---|---|---|
| SF24(*)-(*) | 24” x 24” x 12 | 24” x 24” x 11-1/2” | 400 sq. ft. | 2400 |
| SF24(*)-(*) | 12” x 24” x 12 | 12” x 24” x 11-1/2” | 195 sq. ft. | 1320 |

## Guide Specifications

***1.0 General***

1.1 HEPA filters shall be Flanders Super-Flow®24 as manufactured by Flanders.

1.2 Filter sizes, efficiencies and capacities shall be as specified on the drawings.

***2.0 Construction***

2.1 Filters shall be constructed with twelve 1” pleated media packs arranged in a V-bank configuration. The media packs shall be formed by pleating wet laid micro-fiberglass media with continuous beads of a cured, nonvolatile adhesive.

2.2 The filter frame shall be 20 ga. galvaneal steel, stainless steel and aluminum shall consist of eight C-channel supports attached without the use of mechanical fasteners. The media packs shall be sealed around the entire periphery to the frame with two-component polyurethane.

***3.0 Performance***

3.1 The minimum filter efficiency shall be 99.99% at 0.30 µm when tested with polydisperse DOP aerosol at the rated airflow.

3.2 The maximum pressure drop shall be 1.0” w.g. at the rated airflow.

# PF-1 Pureframe®

## *Filter Holding Frames and Fasteners*

***Model #: Contact Factory***

***Bulletin: PB1308-0508***



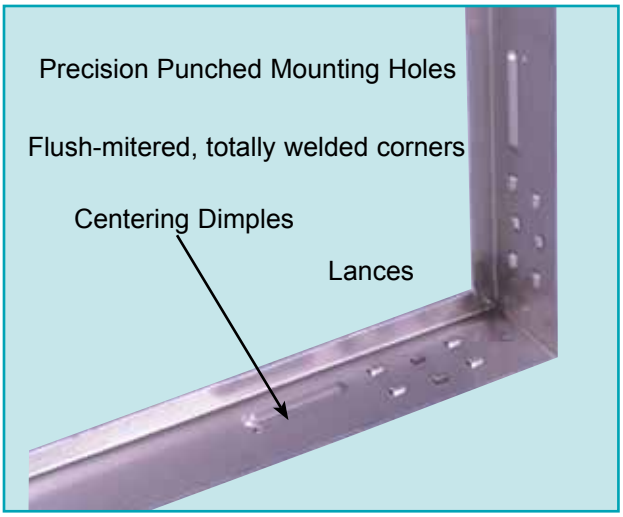
### General

The PF-1 Pureframe® filter holding frame is a building block for built-up filter banks when incorporating ASHRAE rated air filters. It is designed to provide a high degree of sealing integrity while incorporating versatility in applications and accessibility in installation and service.

### Construction

The PF-1 Pureframe® is made with your choice of 304 stainless or 16 gauge corrosion resistant steel. All corners are mitered, continuously welded and ground to form a smooth surface between the frame sealing surface and the gasket at the corner points of the sealing flange.

The PF-1 Pureframe® is a nominal 3 inches in depth and has a series of pre-punched mounting holes to facilitate alignment and assembly. Two rows of dimples are spaced to center the held filter and pre-filter when both are used in combination in a single frame. Also, a series of pre-punched lances accomodate various types of stainless steel fasteners. A closed cel flexible gasket is attached to the sealing flange of each frame.




### Important Features

- Positive seal with spring-loaded fasteners and closed cell gasket
- 16 gauge stainless or corrosion resistant steel.
- Flush mounted, totally-welded corners and deburred edges
- Accomodates any standard size box or header type air filter.
- Easy to install and rugged with pre-punched mounting holes, 3” depth and centering dimples.

## Installation

The filter to be utilized is placed into the PF-1 holding frame using the dimples on the holding frame as guides to align the filters. The dimples are located in two rows along the frame in the 1" and 2" positions.

For large HVAC projects, the PF-1 may be utilized in built-up framing systems for both upstream and downstream air cleaning. Standard flat and V configurations are possible , using support posts for reinforcement when necessary to ensure stability of the filter bank.

## Fasteners

Once in position, the filter is held in place with Type 401 stainless steel spring filter fasteners, which attach to the holding frame through lances that are located along each of the four sides. Tools are not required for installation or removal. The various types of fasteners are shown below.

### Fastener Selection Chart

| Model Number | Length (inch) | Filter Usage | Number Per Frame: Upstream Service | Number Per Frame: Downstream Service |
|---|---|---|---|---|
| P-1 | 1 | 1" panel filter, Precision Pak, PrecisionCell, or Rigid-Air | 2 | 4 |
| P-2 | 2 | 2" panel filter | 2 | 4 |
| P-3 | 3 | 2" panel prefilter with Precision Pak, PrecisionCell, or Rigid-Air | 2 | Not Recommended |
| P-4 | 4 | 4" panel filter, PrecisionCell II | 2 | 4 |
| P-5 | 5 | 4" panel prefilter with Precision Pak bag,PrecisionCell, or Rigid-Air | 2 | Not Recommended |
| P-6 | 6 | 6" PrecisionCell or Rigid-Air | 2 | 4 |
| P-12 | 12 | 12" PrecisionCell, or Rigid-Air | 2 | 4 |
| C-2 | 2 | 2" panel prefilter with PrecisionCell or Rigid-Air | 4 | Not Used |
| C-4 | 4 | 4" panel prefilter with PrecisionCell or Rigid-Air | 4 | Not Used |
| C-12 | 12 | 12" PrecisionCell or Rigid-Air | 2 | |

### Guide Specifications

1.0 Filter holding frames shall be PF1 Pureframe® as manufactured by Flanders.

1.1 Frames shall be manufactured of 16 ga. galvanized steel or Type 304 stainless steel and furnished with factory-installed gasketing. All corners shall be mitered, continuously welded and ground to form a smooth surface between the frame sealing surface and the gasket at the corner points of the sealing flange. All sheared edges of the frame shall be deburred before final assembly.

1.2 Each holding frame shall be a nominal 3" in depth to effect an adequate bearing surface for assembly and mounting.

1.3 The holding frame shall be equipped with 6 pre-punched 9/32" mounting holes to facilitate proper alignment and assembly. Two rows of dimples shall be spaced to center a filter and prefilter when both are used in combination in a single frame. Holding frames shall be equipped with pre-punched lances to accomodate various types of stainless steel fasteners.

1.4 A closed-cell ept/polyethylene/butyl gasket shall be attached to the sealing flange of each holding frame.

# Uni-Frame

## *Media Holding Frame*

***Model #'s: 60055 (Std. Sizes) and 60355 (with Retainer Bars)***

***Bulletin: PB1300-0504***



## General

Uni-Frames are designed for retaining air filter media pads in applications that require additional media support.

The frame is fabricated of 26 gauge corrosion-resistant steel channel with each corner of the frame mitered for squareness. Filter pads are supported on the downstream side with a corrosion-resistant steel expanded metal lathe grid. The expanded metal lathe backing is spot welded to the air exit side to prevent vibration. Retainer bars for the upstream side are available as an option.

## Installation

Typical applications include roof top units, spray booths, residential units, unit ventilators and other applications not suited for ordinary fiberglass throw-away filters because of airflow velocity or environmental considerations

## Guide Specifications

***1.0 General***

1.1 Permanent pad holding frames shall be Uni-Frame as manufactured by Flanders.

***2.0 Construction***

2.1 Frames shall be constructed of 26 ga. corrosion-resistant steel.

2.2 Corners shall be mitered in order to eliminate snagging of the media pad.

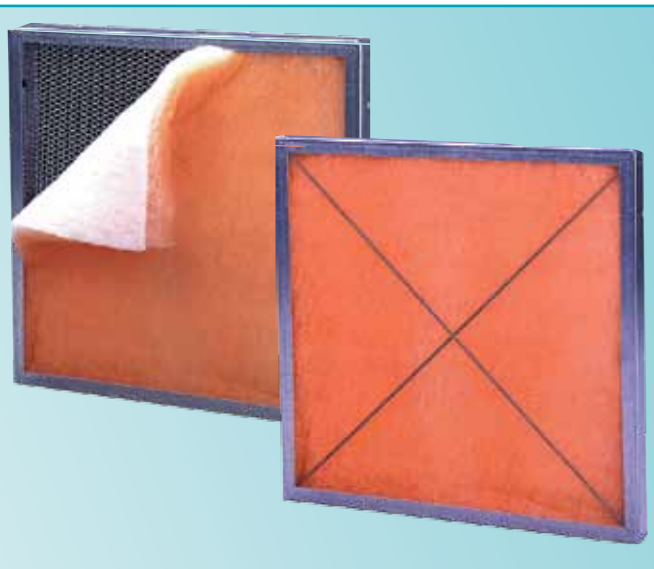
2.3 The media shall be supported on the downstream side by an expanded metal lathe backing which is welded in place.

***3.0 Installation***

3.1 Install frames in accordance with the manufacturers specified recommendation.

Standard 1" and 2" Media Holding frames

| Nominal Size (inches) | Actual Size (inches) |
|---|---|
| 24x24x1 | 23-1/2 x 23-1/2 x 7/8 |
| 20x25x1 | 19-1/2 x 24-1/2 x 7/8 |
| 20x20x1 | 19-1/2 x19-1/2 x 7/8 |
| 16x25x1 | 15-1/2 x 24-1/2 x 7/8 |
| 16x20x1 | 15-1/2 x 24-1/2 x 7/8 |
| 24x24x2 | 23-1/2 x 23-1/2 x 1-7/8 |
| 20x25x2 | 19-1/2 x 24-1/2 x 1-7/8 |
| 20x20x2 | 19-1/2 x 19-1/2 x 1-7/8 |
| 16x25x2 | 15-1/2 x 24-1/2 x 1-7/8 |
| 16x20x2 | 15-1/2 x 19-1/2 x 1-7/8 |



# K-Trac

## *Modular Filter Framing System*

***Model #: Contact Factory***

***PB-1302-0504***

### General

K-Trac Filter Framing Modules are used for ASHRAE rated filters 2 in. to 36 in. in depth. K-Trac Modules are complete factory-designed units which replace multiple field-erected holding frames. They also provide inherent structural strength and leak-proof assembly that is sometimes lacking in frame-type installations.

K-Trac framing members are factory-cut to length, pre-drilled and gasketed for easy and quick assembly. Simple tools and light labor are all that is required. Filters are easily inserted or removed and require no clips or fasteners. Filters are angled into the upper track, then set into the lower track.

### Versatility

K-Trac Filter Framing Modules are available in sizes up to a nominal 12 ft. high and 14 ft. wide for upstream or downstream service. Modules may be joined for larger banks. The 2 in. prefilter track accepts disposable or pleated prefilters for single-stage applications.

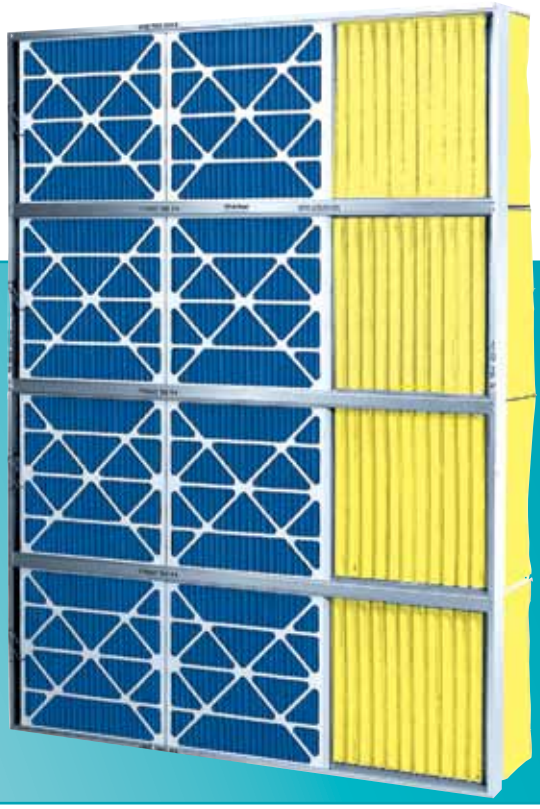
The primary filter track accommodates Precision Pak bag filters, Superflow V, or Rigid-Air filters, or other filters having nominal 1 in. thick headers.

### Construction

K-Trac framing members are constructed of Type 6063-T5 mill-finish extruded aluminum. Clear anodizing is available as an option. Prefilter and primary filter tracks are factory-gasketed at the top and bottom with polypropylene pile air seals.

Side-to-side gasketing is furnished on the filter headers with every change. Side gaskets are compressed by a positive-sealing spring-loaded compression bar actuated by a sealing lever. The compression bar is retracted when loading or unloading filter elements.

Modules 8 ft. wide include one vertical support for the upstream side. Wider modules are furnished with vertical supports on the upstream and downstream sides. Sealing levers are located on the left side of each horizontal row when facing in the direction of air flow unless specified otherwise.



### Important Features

- Provides substantial savings in field assembly
- Filters are tightly sealed to eliminate air bypass
- Filters can be replaced quickly and easily
- Modules are factory-engineered with built-in stiffening
- Construction is corrosion-resistant aluminum

| Height Code | Overall Height | Face Velocity (fpm | Height Code Overall | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 15W | 20W | 25W | 30W | 35W | 40W | 45W | 50W | 55W | 60W | 65W | 70W |
| | | | 36-1/16 | 48-1/16 | 59-7/16 | 71-7/16 | 82-13/16 | 94-13/16 | 106-13/16 | 118-13/16 | 129-9/16 | 141-9/16 | 152-15/16 | 164-15/16 |
| 10H | 24-1/2 | 375 | 2250 | 3000 | 3750 | 4500 | 5250 | 6000 | 6750 | 7500 | 8250 | 9000 | 9750 | 10500 |
| | | 500 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 | 11000 | 12000 | 13000 | 14000 |
| | | 625 | 3750 | 5000 | 6250 | 7500 | 8750 | 10000 | 11250 | 12500 | 13750 | 15000 | 16250 | 17500 |
| 15H | 36-15/16 | 375 | 3000 | 4500 | 5250 | 6750 | 7500 | 9000 | 9750 | 11250 | 12000 | 13500 | 14250 | 15750 |
| | | 500 | 4000 | 6000 | 7000 | 9000 | 10000 | 12000 | 13000 | 15000 | 16000 | 18000 | 19000 | 21000 |
| | | 625 | 5000 | 7500 | 8750 | 11250 | 12500 | 15000 | 16250 | 18750 | 20000 | 22500 | 23750 | 28250 |
| 20H | 48-13/16 | 375 | 4500 | 6000 | 7500 | 9000 | 10500 | 12000 | 13500 | 15000 | 16500 | 18000 | 19500 | 21000 |
| | | 500 | 6000 | 8000 | 10000 | 12000 | 14000 | 16000 | 18000 | 20000 | 22000 | 24000 | 26000 | 28000 |
| | | 625 | 7500 | 10000 | 12500 | 15000 | 17500 | 20000 | 22500 | 25000 | 27500 | 30000 | 32500 | 35000 |
| 25H | 61-1/4 | 375 | 5250 | 7500 | 9000 | 11250 | 12750 | 15000 | 16500 | 18750 | 20250 | 22500 | 24000 | 26250 |
| | | 500 | 7000 | 10000 | 12000 | 15000 | 17000 | 20000 | 22000 | 25000 | 27000 | 30000 | 32000 | 35000 |
| | | 625 | 8750 | 12500 | 15000 | 18750 | 21250 | 25000 | 27500 | 31250 | 33750 | 37500 | 40000 | 43750 |
| 30H | 73-1/8 | 375 | 6750 | 9000 | 11250 | 13500 | 15750 | 18000 | 20250 | 22500 | 24750 | 27000 | 29250 | 31500 |
| | | 500 | 9000 | 12000 | 15000 | 18000 | 21000 | 24000 | 27000 | 30000 | 33000 | 36000 | 39000 | 42000 |
| | | 625 | 11250 | 15000 | 18750 | 22500 | 27250 | 30000 | 33750 | 37500 | 41250 | 45000 | 48750 | 52500 |
| 35H | 85-9/16 | 375 | 7500 | 10500 | 12750 | 15750 | 18000 | 21000 | 23250 | 26250 | 28500 | 31500 | 33750 | 36750 |
| | | 500 | 10000 | 14000 | 17000 | 21000 | 24000 | 28000 | 31000 | 35000 | 38000 | 42000 | 45000 | 48500 |
| | | 625 | 12500 | 17500 | 21250 | 26250 | 30000 | 35000 | 38750 | 43750 | 47500 | 52500 | 56250 | 61250 |
| 40H | 97-7/16 | 375 | 9000 | 12000 | 15000 | 18000 | 21000 | 24000 | 27000 | 30000 | 33000 | 36000 | 39000 | 42000 |
| | | 500 | 12000 | 16000 | 20000 | 24000 | 28000 | 32000 | 36000 | 40000 | 44000 | 48000 | 52000 | 56000 |
| | | 625 | 15000 | 20000 | 25000 | 30000 | 35000 | 40000 | 45000 | 50000 | 55000 | 60000 | 65000 | 70000 |
| 45H | 109-7/8 | 375 | 9750 | 13500 | 16500 | 20250 | 23250 | 27000 | 30000 | 33750 | 36750 | 40500 | 43500 | 47250 |
| | | 500 | 13000 | 18000 | 22000 | 27000 | 31000 | 36000 | 40000 | 45000 | 49000 | 54000 | 58000 | 63000 |
| | | 625 | 16250 | 22500 | 27500 | 33750 | 38750 | 45000 | 50000 | 56250 | 61250 | 67500 | 72500 | 78750 |
| 50H | 121-3/4 | 375 | 11250 | 15000 | 18750 | 22500 | 27250 | 30000 | 33750 | 37500 | 41250 | 45000 | 48750 | 52500 |
| | | 500 | 15000 | 20000 | 25000 | 30000 | 35000 | 40000 | 45000 | 50000 | 55000 | 60000 | 65000 | 70000 |
| | | 625 | 18750 | 25000 | 31250 | 37500 | 43750 | 50000 | 56250 | 62500 | 68750 | 75000 | 81250 | 87500 |
| 55H | 134-3/16 | 375 | 12000 | 16500 | 20250 | 24750 | 28500 | 33000 | 36750 | 41250 | 45000 | 49500 | 53250 | 57750 |
| | | 500 | 16000 | 22000 | 27000 | 33000 | 38000 | 44000 | 49000 | 55000 | 60000 | 66000 | 71000 | 77000 |
| | | 625 | 20000 | 27500 | 33750 | 41250 | 47500 | 55000 | 61250 | 68750 | 75000 | 82500 | 88750 | 96250 |
| 60H | 146-1/16 | 375 | 13500 | 18000 | 22500 | 27000 | 31500 | 36000 | 40500 | 45000 | 49500 | 54000 | 58500 | 63000 |
| | | 500 | 18000 | 24000 | 30000 | 36000 | 42000 | 48000 | 54000 | 60000 | 66000 | 72000 | 78000 | 84000 |
| | | 625 | 22500 | 30000 | 37500 | 45000 | 52500 | 60000 | 67500 | 75000 | 82500 | 90000 | 97500 | 105000 |

1. Height and Width Code: The first numeral represents the number of 24 in. x 24 in. filters high or wide. If 24 in. x 12 in. filters are also used in the height or width, the second numeral is “5”.
2. Dimensions are based on using nominal size 24 in. x 24 in. and 24 in. x 12 in. filters. Select filters from capacity charts for Precision Pak bag filters or single-headered PrecisionCell or Rigid-Air filters.
3. Sizes using 24 in. x 12 in. filters in both height and width require a 12 in. x 12 in. blankoff; for example, a KT- 15H35W has a 20 sq. ft. available, not 21 sq. ft.
4. For capacities other than those shown, ratio the face velocities.

## Model Number Development:

| KT | -- | 20H | 35W | -- | U | L | X |
|---|---|---|---|---|---|---|---|
| K-Trac | | Height Code | Width Code | | Service Location | Lever Location | Special |

- Height and Width Code: The first numeral represents the number of 24 in. x 24 in. filters high or wide. If 24 in. x 12 in. filters are also used in the height or width, the second numeral is “5”.
- Service Location: U (upstream) or D (downstream).
- Lever Location: L (left side) or R (right side) when facing in the direction of airflow (air directed at your back).
- For special features or sizes: Use Suffix “X” and describe them.

**KT-20H35W-ULX**

**This example represents a K-Trac module, 2 filters high and 3-1/2 filters wide, upstream service and left side levers. The letter X indicates that special features are required.**

## How the K-Trac Works

Quick and easy assembly with a ratchet wrench

Assembled module

Installing filters and prefilters

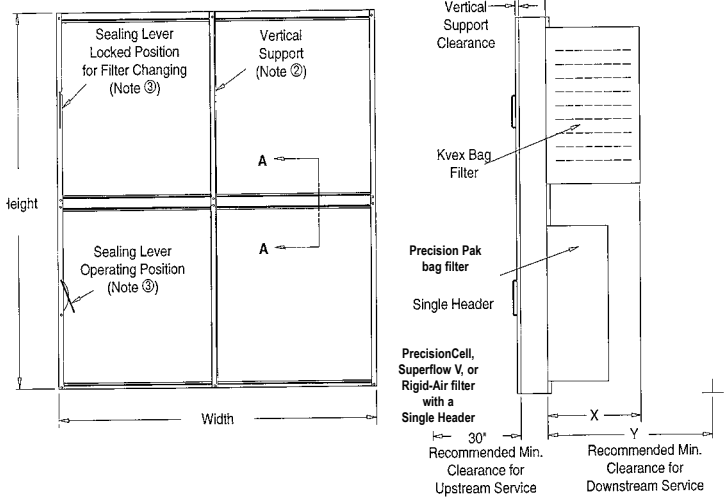
Spring-loaded sealing levers actuate pressure bars on both the prefilter and primary filter.

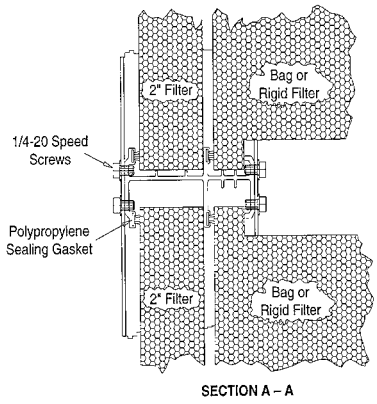
Filters with poly-foam side gasket prevent leaking between adjacent filters

## Filter Usage and Module Weight

| Height Code | Filters Weight (lbs.) | Width Code | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 15W | 20W | 25W | 30W | 35W | 40W | 45W | 50W | 55W | 60W | 65W | 70W |
| 10H | Filters | 1A-1C | 2A | 2A-1C | 3A | 3A-1C | 4A | 4A-1C | 5A | 5A-1C | 6A | 6A-1C | 7A |
| | Weight | 10 | 13 | 15 | 17 | 19 | 22 | 24 | 26 | 28 | 31 | 33 | 35 |
| 15H | Filters | 1A-2C | 2A-2C | 2A-3C | 3A-3C | 3A-4C | 4A-4C | 4A-5C | 5A-5C | 5A-6C | 6A-6C | 6A-7C | 7A-7C |
| | Weight | 18 | 22 | 26 | 30 | 34 | 38 | 42 | 46 | 50 | 54 | 58 | 62 |
| 20H | Filters | 2A-2C | 4A | 4A-2C | 6A | 6A-2C | 8A | 8A-2C | 10A | 10A-2C | 12A | 12A-2C | 14A |
| | Weight | 19 | 23 | 27 | 31 | 35 | 39 | 43 | 47 | 51 | 55 | 59 | 63 |
| 25H | Filters | 2A-3C | 4A-2C | 4A-4C | 6A-3C | 6A-5C | 8A-4C | 8A-6C | 10A-5C | 10A-7C | 12A-6C | 12A-8C | 14A-7C |
| | Weight | 26 | 32 | 38 | 44 | 49 | 55 | 61 | 67 | 72 | 78 | 84 | 90 |
| 30H | Filters | 3A-3C | 6A | 6A-3C | 9A | 9A-3C | 12A | 12A-3C | 15A | 15A-3C | 18A | 18A-3C | 21A |
| | Weight | 28 | 34 | 39 | 45 | 51 | 57 | 62 | 68 | 74 | 79 | 85 | 91 |
| 35H | Filters | 3A-4C | 6A-2C | 6A-5C | 9A-3C | 9A-6C | 12A-4C | 12A-7C | 15A-5C | 15A-8C | 18A-6C | 18A-9C | 21A-7C |
| | Weight | 35 | 43 | 50 | 58 | 65 | 73 | 80 | 88 | 95 | 102 | 110 | 117 |
| 40H | Filters | 4A-4C | 8A | 8A-4C | 12A | 12A-4C | 16A | 16A-4C | 20A | 20A-4C | 24A | 24A-4C | 28A |
| | Weight | 37 | 44 | 52 | 59 | 66 | 74 | 81 | 89 | 96 | 104 | 111 | 119 |
| 45H | Filters | 4A-5C | 8A-2C | 8A-6C | 12A-3C | 12A-7C | 16A-4C | 16A-8C | 20A-5C | 20A-9C | 24A-6C | 24A-10C | 28A-7C |
| | Weight | 44 | 53 | 62 | 72 | 81 | 90 | 99 | 108 | 118 | 127 | 136 | 145 |
| 50H | Filters | 5A-5C | 10A | 10A-5C | 15A | 15A-5C | 20A | 20A-5C | 25A | 25A-5C | 30A | 30A-5C | 35A |
| | Weight | 45 | 55 | 64 | 73 | 82 | 91 | 101 | 110 | 119 | 128 | 137 | 147 |
| 55H | Filters | 5A-6C | 10A-2C | 10A-7C | 15A-3C | 15A-8C | 20A-4C | 20A-9C | 25A-5C | 25A-10C | 30A-6C | 30A-11C | 35A-7C |
| | Weight | 53 | 64 | 75 | 86 | 97 | 107 | 118 | 129 | 140 | 151 | 162 | 173 |
| 60H | Filters | 6A-6C | 12A | 12A-6C | 18A | 18A-6C | 24A | 24A-6C | 30A | 30A-6C | 36A | 36A-6C | 42A |
| | Weight | 54 | 65 | 76 | 87 | 98 | 109 | 120 | 131 | 142 | 153 | 164 | 175 |

- A= 24 in. x 24 in. face size filter. C = 24 in. x 12 in. face size filter.
- Weight does not include filters. Add approximately 6 lbs. per Precision Pak bag filter, 20 lbs. per PrecisionCell filter, 17 lbs. per Superflow V filter, and 17 lbs. per Rigid-Air filter.






## Drawing Notes

1. Framing members of extruded aluminum are factory-cut to exact length, pre-drilled and gasketed.
2. One vertical support for the center of the upstream side will be furnished on modules nominal 8 ft. wide. Wider modules will be furnished with vertical supports on both the upstream and downstream sides.
3. Sealing levers are located at the end of each horizontal row on the left when facing the module on the upstream side unless specified on the right or on the downstream side.
4. The largest single module is 12 ft. high by 14 ft. wide. Modules may be combined to form larger banks.

## Installation of Final Filters:

1. Install gasketed filters with pleats vertical wherever possible.
2. Place sealing lever in locked position and hold filter on the downstream side of the module.
3. Insert the top of the filter into the upper narrow track until it clears the lower flange.
4. Drop the filter into the bottom narrow track. Fill the row with filters, moving them to the side opposite the sealing lever.
5. Unlock the lever to seal the row airtight.

## Guide Specifications

***1.0 Framing Modules***

1.1 Filter framing modules shall be K-Trac as manufactured by Flanders, Inc.

***2.0 Construction***

2.1 Extruded aluminum framing members shall be Type 6063-T5, with an average thickness of .095 in. They shall be cut to size and drilled for simple speed screw assembly into modules of the sizes noted in the schedules and plans.

2.2 Both prefilter and final filter tracks shall be permanently gasketed to eliminate air bypass.

2.3 Where required, vertical support members shall be furnished to support horizontal members.

2.4 The prefilter track shall be separate to allow removal and insertion of prefilters without disturbing the final filters.

2.5 Each horizontal row of prefilters and final filters shall include factory-installed positive-sealing bars to permit easy changeout of filters. Gasket on filters must be compressed during operation.

2.6 Modules shall be complete with speed-screws necessary for field assembly.

***3.0 Features***

3.1 Model number and capacities shall be as specified and/or shown on the drawings.

3.2 Provide options as specified.

Flanders®
FOREMOST IN AIR FILTRATION

***Facility & Office Locations:***
*Washington, NC (2-facilities); Smithfield, NC (2-facilities); Ardmore, OK; Bartow, FL; Salt Lake City, UT; Momence, IL; Hudson, NY; Tijuana, MX; Singapore; and Netherlands*

## Flanders Corporation


**Corporate Office**
**531 Flanders Filters Road**
**Washington, NC 27889**
**Local Phone: 252-946-8081**
**Fax: 252-946-3425**

**Customer Service**
**Customerservice@Flanderscorp.com**
**Toll Free Phone: 800-800-2210**
**Toll Free Fax: 800-995-6131**

**www.Flanderscorp.com**


Distributed By:

**Catalog: ARWCAT_0712**