NEW!
Modified Channel Filters
Model 62R MERV 11 Pleat

Flanders PrecisionAire
Foremost in Air Filtration

Clean air filters
SAVE ENERGY.

We make ANY SIZE
air filter.

Nationwide TECHNICAL
SUPPORT available.

A Global Leader in
COMMERCIAL FILTER SUPPLY
For fast, efficient service, contact us today at 1-800-347-2220 and look for us on the internet at www.precisionaire.com
Dear Valued Customer:

Flanders Precisionaire would like to take this opportunity to thank you for your continued business. It is our pledge to continue to provide you with top quality products and service throughout the coming year.

With over 87 years in the filter industry, Flanders Precisionaire is proud to be one of the oldest and most well-established filter manufacturers. We are committed to bringing you the best in air filtration, by providing the industry's most diverse line of filter products, ranging from disposable filters to clean-room applications. As the leader in air filtration products, we encompass all your filter needs.

With the largest geographical coverage in America, Flanders Precisionaire has the ability to ship directly from our ten (10) manufacturing plants that are strategically located throughout the country. Our Research and Development teams have been hard at work so that we may introduce a number of new products to our line. Flanders Precisionaire continues to set the innovative pace in our industry, and our commitment to quality and value will be evident throughout the coming year. We are committed to bringing you the best in air filtration.

Our organization has instituted many positive changes over the past year. With these core changes, we have been able to improve the efficiency within our manufacturing facilities, customer service, and our sales team. Our customers can now continuously enjoy the many benefits of doing business with Flanders Precisionaire.

Flanders Precisionaire is committed to getting you product on time as we are diligently working towards 100% on time delivery. Flanders Precisionaire continues to lead the market in both product line and standards.

Our success and growth in the Wholesale market is further evidence that Flanders Precisionaire remains the foremost in air filtration. We look forward to remaining your single source for all your filter needs.

Best regards from your partners in air filtration,

Flanders Precisionaire
Disposable Air Filters
The widest selection of disposable panels you’ll find anywhere. Spun Glass and synthetic media...all standard sizes and almost any “special” size.

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

Paint Booth Products
A complete line of aftermarket filter products for all styles of paintbooths...down-drafts, cross-drafts and work stations.

Air Filter Media & Auto Rolls
Cut to fit hammock & 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
Without exaggeration, one of the largest inventories of pleated panel filters you’ll find anywhere. Five styles 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.

Medium & High Efficiency Extended Surface Type Filters
Huge line of “bag” filters in all of the most popular sizes and efficiencies, plus our new XDH bag which holds up to twice as much dust as ordinary bags.

Metal Washable Filters
Rugged metal filters for a variety of applications. Top quality materials and workmanship.

Gas Phase & Odor Control
Pleated panel filters that have been treated with special odor adsorbing/neutralizing materials, as well as 50% & 75% fill granular carbon filters.

HEPA Filter
For genuine HEPA grade filtration. 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.

Residential/Light Commercial Air Cleaners & Filters
Fast, easy and profitable air filtration upgrades...made by one of the world’s leaders in critical air filtration. Equal or superior filter media replacements for competing systems...and typically easier to install.

Electronic Air Cleaners
Near-HEPA quality air purification for the whole house or just a room.
# HVAC/R Distributor Catalog

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General
Flanders Precisionaire 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 Precisionaire 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 100% high bulk polyester fibers that are thermo bonded with a fire retardant resin.

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
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 900 Class 2 listed
• 1/2 inch, 1 inch, 2 inch depths
• Special sizes available upon request
1.0 General
1.1 Disposable filters shall be Model HD Industrial Grade filters as manufactured by Flanders Precisionaire.
1.2 Filters shall be UL 900 Class 2 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.
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 900 Class 2 for flammability.

Important Features
- One-piece frame
- UL 900 Class 2
- 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

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Call Free: 1-800-347-2220
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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.
General

The Flanders precisionaire 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 precisionaire 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 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. Four separate Modified Channel Styles are offered:

**EZ Flow:** The filtering media is continuous filament spun glass. A resinous bonding agent provides rigidity and resistance to media compression. A metal media retainer is positioned on the downstream side. Retainer may be either recycled bottlecap or expanded metal, depending on filter size.

**EZ Flow II:** Construction is identical to the EZ Flow Modified Channel, but there is no metal media retainer.

**Flanders Precisionaire Synthetic:** The filtering medium is made of 100% nonwoven polyester synthetic fibers chemically bonded with a fire retardant resin. Because of the synthetic nature of the fiber, the media is extremely resistant to moisture and other environmental extremes.

**Flanders Precisionaire Synthetic with Metal:** Construction is identical to the Flanders Precisionaire Synthetic filter but with an added metal retainer on the downstream side.
1.0 General
1.1 Disposable filters shall be (EZ Flow MC, EZ Flow IIIMC, Flanders Precisionaire MCS, Flanders Precisionaire MCS1) Modified Channel Frame filters as manufactured by Flanders.
1.2 Filters shall be UL 900 Class 2 listed.

2.0 Filter Construction
2.1 Frame shall be one-piece chipboard channel formed into a wedge sloping to the center of the filter on the upstream side and flat on the downstream side to ensure ease of installation and good sealing in the filter track. Media pack shall be pressed between the two lips of the filter frame and sealed with double beads of hot melt adhesive running the full perimeter of the frame.

2.1 Media pack for the EZ Flow II MC shall be continuous filament spun glass with a resionous bonding agent.

(OR) Media pack for the EZ Flow II MC shall be continuous filament spun glass with a resionous bonding agent and a metal grid on the air exit side.

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

(OR) Media pack for the Flanders Precisionaire MCS1 shall be 100% nonwoven polyester synthetic fibers chemically bonded with a fire retardant resin and a metal grid on the air exit side.

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.
Rugged, Heat-sealed Construction

Flinders 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 overcut of media outside the seal forms 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 gage galvanized wire frame
- Merv 6-10 available
- UL 900 Class 2
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-xxxxx 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-xxxxx 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-xxxxx 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.
Flanders Precisionaire offers a wide variety of filtration products for downdraft and crossdraft paintbooths and prestations. For the most part, filtration products required for all of these fall into three general categories which are color coded to the drawings at left which indicate their placement in each type of booth.

**Intake Filters**

Air Intake filters are as important to a great paint job as the booth itself. The intake filters are the primary defense against foreign particles landing on the painting surface. Any particle larger than 10 microns can cause a defect on a paint job. Intake filters are typically either panels or pads. Intake filters in a downdraft booth and prestations are above the painting surface. In crossdraft booths, they are typically in the door.

**Exhaust/Paint Arrestor Filters**

Exhaust filters play an important role in maintaining proper airflow balance, increasing cleanliness of exhaust stacks, reducing maintenance of the exhaust system and in controlling V.O.C. emissions. The purpose of exhaust filters is to capture overspray particles and remove them from the airstream as air is removed or recirculated back into the booth. Crossdraft and semi-downdraft booths use media pads which are placed on grids in the rear wall or lower portion of the side walls in filter housings. Downdraft booths use a long pad that is placed into a pit below the painting surface.

**Prefilters**

A prefilter is designed to filter out large particles before the air reaches the intake filter. This prolongs the life of the intake filter, increases airflow in your booth and reduces maintenance costs on the intake stack and mechanical parts. The pre-filter is typically found only in heated booths. Crossdraft booths will very rarely have a pre-filter. In downdraft and semi-downdraft booths, the prefilter is located somewhere along the duct-work bringing air into the booth.
SA600-G10 Diffusion Media for Air Intake
For downdrafts and prep stations.

This filter provides the highest level of protection against paint damaging particles available today. In addition to its leading reputation in filtering ability, the SA600-G10 is able to withstand high temperature applications, up to 140 degrees Celsius! This filter does not discolor or break down in the heated booth environment. Other leading media using traditional tackifiers and PVC resins, produce a heavy discoloration and the media expands reducing the filtering ability.

This re-engineered media and manufacturing process has eliminated these flaws. Using ecologically sound materials, and eliminating PVC resins, the media discoloration and media expansion have been eliminated. The SA600-G10 is a 1 inch diffusion media, and carries the prestigious G10 mark. G10 is a European standard for test performance, and only qualified media can claim this mark of distinction. It has a high dust holding capacity for long life, and stops all particles of paint damaging size from entering a paintbooth when installed properly.

This product has a normal service life of 10 to 18 months, depending on outside air quality and usage. The filter is available in bulk rolls or cut pads for your convenience. Cut pads are cut in our facility to your booth requirements.

SAR-1 Pad for Air Intake
For use as an intake blanket on crossdraft booths.

The SAR-1 media, made in Switzerland, has a 1/2 inch loft, and is optimally designed for efficiency and dust holding capacity. For crossdraft booths, the SAR-1 pad, sometimes referred to as a blanket, is tucked into the doors of the booth. There is usually only one large pad on each door. Oversized SAR-1 media pads can be easily trimmed.

The SAR-1 media is a premium choice for crossdraft requirements. The tackifier and heavily calendered exit side allow for excellent particle retention. The SAR-1 is a premium choice for crossdraft filtration.

SAR-1 Panels for Air Intake
For use in crossdraft and some downdraft booths.

The SAR-1 PANEL, made in Switzerland, is a premium choice for panel filtration. The SAR-1 PANEL is made from two media pads. A metal support is dielectrically heat sealed in between the two media layers providing support and rigidity.

The first media layer is designed to catch large particles entering the booth. The second media layer is designed to catch the smaller particles. 100% of the fibers in the second layer are tackified to retain trapped particles. The combination of small fiber size and a calendered exit provide unsurpassed R-1 filtration.

The metal support is made from 9 gauge galvanized steel, which will not rust. The support is formed into a rectangular shape and contains two crossbars for added stability.

When choosing the correct size, measure the metal support. The metal support will be 3/8” under the listed size. For instance, a 20x20 panel’s ring will measure 19-5/8 x 19-5/8.

Crossdraft booths will have a series of housings that look like square or rectangular holes in the booth doors. Panel filters have extra media overlapping the metal support which act as gasketing when placing the panel filter inside the housing and create a tight seal to prevent any air bypass around the filter.
Series ST55 Panel for Air Intake
For use in crossdraft and some downdraft booths.

The SERIES ST55 PANEL, made in the USA, is an economical choice for crossdraft booths. The SERIES ST55 is made from two media pads. A metal support is dielectrically heat sealed in between the two media layers, providing support and rigidity.

The first media layer is designed to catch large particles entering the booth. The second media layer is designed to catch the smaller particles. The downstream side of the second layer is treated with a sticky non-migrating tackifier which holds trapped particles inside the filter. The metal support is made from 9 gauge galvanized steel, which will not rust. The support is formed into a rectangular shape and contains two crossbars for added stability.

When choosing the correct size, measure the metal support. The metal support will be 3/8" under the listed size. For instance, a 20x20 panel's ring will measure 19-5/8" x 19-5/8.

Series 332 Paint Arrestor
Fiberglass with polyester for use as a paint arrestor in all types of booth.

Series 332 is our highest quality fiberglass media available. Made with 18 grams of fiberglass per square foot, and a polyester exit layer, the Series 332 is more efficient and holds more paint than almost any other fiberglass products.

Series 332 comes in 200 ft. rolls and in pads for crossdraft and semi-downdraft booths. Series 332 is made from air-laid fiberglass forming a 2.5" thickness and a thin polyester layer bonded to the exit side for added efficiency.

Series 332 fibers are ideal for paint capture due to their loose weave. The paint particles collide with the fiberglass fibers and are removed from the airstream, and the fine particulate is removed by the polyester exit layer.

A grid is needed to hold the pad which is standard in most booths, or are available through Flanders Precisionaire customer service.

If your downdraft booth uses a pit, measure the width of the pit to find the appropriate roll, or check our booth guide. To change the media, simply, unwind the roll to the proper length, and cut a pad.

FP3-Paint Arrester
Premium Polyester Paint Arrester for use in all booth types.

FP3 media is an excellent choice for exhaust media in any booth. Use of this media will keep the booth exhaust system cleaner when converting from fiberglass, however some older booths do not work well with the resistance levels.

FP3 media combines three distinct layers of polyester fibers forming a funnel effect. The first layer captures large particles. The second and third layers catch the finer particles.

By utilizing an open weave on the first layer, particles do not cause the filter to quickly clog up allowing large amounts of paint to be captured without substantial increases in air pressure.

The pad sizes listed below are typical in crossdraft and semi-downdraft booths. If converting from Styrobaffle or Styrofoam, grids will be needed to hold the pads in place. If your downdraft booth uses a pit, measure the width of the pit to find the appropriate roll, or check our booth guide.
**Series 331Y PA**

22 gram Fiberglass Paint Arrestor for use in all booth types.

Series 331Y is a high quality fiberglass media. Made with 22 grams of fiberglass per square foot, the Series 331Y is more efficient and holds more paint than many other fiberglass products.

Series 331Y comes in 200 ft. rolls and is also available in pads for crossdraft and semi-downdraft booths.

Series 331Y is made from air-laid fiberglass forming a 2.5” thickness. The exit side has a skin backing for added efficiency.

Series 331Y fibers are ideal for paint capture due to their loose weave. The paint particles collide with the fiberglass fibers and are removed from the airstream.

If your downdraft booth uses a pit, measure the width of the pit to find the appropriate roll, or check our booth guide. To change the media, simply, unwind the roll to the proper length, and cut a pad.

**Series 330G PA**

15 gram Fiberglass Paint Arrestor for all booth types.

Series 330G is our economy grade fiberglass media. Made with 15 grams of fiberglass per square foot, the Series 330G holds more paint than other economy fiberglass media due to its skin exit side.

Series 330G comes in 100 ft. rolls compared to many of our competitors 200-300 ft. rolls. The fiberglass is also available in pads for crossdraft and semi-downdraft booths.

Series 330G is made from air-laid fiberglass forming a 2.5” thickness. The exit side has a skin backing for added efficiency.

Series 330G fibers are ideal for paint capture due to their loose weave. The paint particles collide with the fiberglass fibers and are removed from the airstream.

If your downdraft booth uses a pit, measure the width of the pit to find the appropriate roll, or check our booth guide. To change the media, simply, unwind the roll to the proper length, and cut a pad.

**Series 225T Cube**

2-Ply Self Supportive Cube Filter for use as a paint arrestor.

225T Cube filters are a single pocket trapezoid cube filter. A 1” dual denier polyester media is sewn into shape. The filter is then attached to a 9 gauge wire for support when installed in the filter housing.

Due to their unique design, cube filters have a larger surface area than conventional pads. The increase in surface area allows the filter to hold more contaminants thereby increasing the life of the filter.
325T & 425T-Cubes
Three & Four Stage Cube Filters for use as a paint arrestor.

Two products make up our premium exhaust cube product line. The Series 325T, which is 98% efficient, and the Series 425T which is 99% efficient. The exhaust cube filters have a larger surface area than a conventional flat pad. This increase in surface area reduces the restriction to airflow, and increases the paint holding capacity of the filter. This means better airflow and longer life.

The Series 325T is made from a polyester media supported by a 9 gauge wire frame. The dual denier media is used as an initial barrier, and a tightly woven thin media is used as a final particle barrier. This filter captures an average of 98% of overspray in weight.

The Series 425T has an added layer of media applied to the downstream side of the filter. Although the construction is the same as the Series 325T, the added layer of single denier polyester fibers gives the Series 425T a 99% efficiency rating.

PS125-Bag
Scrim-Back Polyester Media Bags for use as a secondary paint arrestor in selected booths.

Each bag is hand sewn and attached to a 9 gauge galvanized support frame, and includes a 1 inch header for easy placement in side access housings. Special bags may require a wire support basket, no header or frame, or loops at the end of each pocket for support.

The media is a 1” single denier polyester fiber with a scrim backing. This media has little effect on the airflow, and has a high dust holding capacity. The unique pocket design increases the surface area of the media. This increase in surface area will increase the life of the filter, and reduce the pressure drop.

If the exhaust bag is the same size as a booth’s intake bags, it is common to rotate the intake bags to the exhaust bags to reduce costs.

Bag measurements are nominal in size. If a bag is 15.5” x 24.5” x 19.5”, the listed size is 16” x 25” x 20”. Please note this difference when measuring your exhaust bags.

Andrea & PS125 Exhaust Filters
The Andrea filter is a paper paint arrestor with a unique design. Kraft paper is pleated into an accordion-like form with holes punched in the paper at consistent intervals. A second layer of paper is attached to the back with different hole placements.

When air passes through the filter, it hits the wall of the second kraft paper layer and is diverted through the second hole. This air turbulence and laws of motion cause the paint to collect on the paper and cleaned air to pass through the filter.

The PS125 Water Wash Pads are designed specifically for use in select Spraybake brand booths. Certain models of spraybake use a water wash system as a secondary exhaust. This water wash system requires special pads to be used to filter out particulate in the system.

The fiber has a reinforced scrim backing on the downstream side to prevent fiber breakoff or migration. The water wash pads are also available in custom sizes.
Our filters are not affiliated with SPRAYBAKE®. Use of the registered SPRAYBAKE® name is for comparative purposes only.

**Series 225T Panel**

2-ply Panel and Link Filter for use as a pre-filter in downdraft booths.

The 2 ply panel filters are constructed using two layers of poly synthetic fibers. These layers are designed to capture large particles in the first layer and smaller particles throughout the second layer.

A 9 gauge wire frame with two cross pieces is dielectrically heat sealed inside the filter for support. The media overlaps the support, which provides a gasketing effect reducing air bypass around the filter.

A tackifier is applied in between the last two layers to stabilize any migrating particles and prevent the discharge of particles from the filter. The graduated media design produces a superior dust holding capacity that will outlast most filters on the market. Panel filters are 100% moisture resistant and will not warp or deteriorate in wet or humid conditions. By utilizing one continuous panel in a filter track, and its selvedged edge, a panel filter eliminates air bypass so common among cardboard framed filters.

When measuring the correct filter for your booth, first measure the entire filter track. This measurement should have a track height of 14-25 inches and a length of 14-100 inches. The height of the 2 Ply Panel is listed as a nominal size. For instance, if a filter ring measures 15.5" x 19.5", then the correct size is 16" x 20". There are hundreds of standard sizes available. Custom sizes are also available.

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**Model 40 Standard Capacity Pleated Filters**

For use as a pre-filter in downdraft booths.

Model 40 Pleats are designed to operate in almost every type of installation. Available in 1 in., 2 in. and 4 in. nominal thicknesses, these filters have an average atmospheric dust spot efficiency range of 25-30% per ASHRAE Standard 52.1 test methods. Model 40 Pleats offer greater efficiency and service life than disposable filters, pad and frame systems, or metal washable filters. The overall design of this product makes these filters the accepted choice in applications requiring high performance and extended service.

Filter frames are constructed from two pieces of die-cut, moisture-resistant carrier board. Components “telescope” into one another and provide double-wall construction and a precision fit. The frame includes diagonal and horizontal support members bonded to the media on the air entering and leaving sides for unsurpassed frame strength, locking corners and positive media-to-frame seal reduces the possibility of air bypass.

The filter is made from fully synthetic, high-loft and reinforced media. It is continuously laminated to an expanded metal grid on the air leaving side to provide pleat stability throughout the life of the filters and prevent media flutter while in operation. The unique radial wedge allows for total media usage and provides maximum air flow.
HD Poly-T/A

Heavy duty synthetic filter for use as a pre-filter in downdraft booths.

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 work-loads. A wide range of standard face sizes are available, plus nearly any “special” size.

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

The filter media consists of 100% high bulk polyester fibers that are thermo-bonded with a fire retardant resin. Support grilles of 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.

Sizes listed below are the most common sizes required for spraybooth applications. Many additional standard sizes are available. Custom sizes are available.

Polyester Bulk Media Rolls and Pads

For use as a pre-filter in downdraft booths.

Polyester pads and rolls are made of a dual layer polyester media with a dry tackifier. The filter is cut into various pad sizes from the roll and placed into a metal holding frame (See Uniframe on page 79). The 1DT media is a 1 inch thick filter, and the 2DT media is a 2 inch thick filter. The media can be ordered in pre-cut pads or bulk rolls, and can easily be trimmed with scissors.

Model KKM

Washable permanent filter for use as a pre-filter in downdraft booths.

The KKM permanent filter is a heavy duty, washable, aluminum media, all metal filter.

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

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.
**Precision Pak**

High efficiency bag filter for use as a prefilter in downdraft booths and prepstations.

The Precision Pak ASHRAE bag use a fully synthetic media that provides an efficiency rating of 45-55%. The pockets are hand sewn or ultrasonically sealed and fastened to an all aluminum frame. They are designed for specific booths and prepstations that can accommodate their special size and performance properties. UL 900 Class 2 Listed.

Precision Pak bags have a large amount of media surface area. This decreases the pressure drop and increases the capacity. These bags hold substantial amounts of dirt removed from the airstream. Use of these bags will ensure a clean environment throughout the intake stack and prolonged life of the ceiling diffusion media.

Bag filters are sized nominally in their length and width. If the booth track measures 19.5" x 19.5", then the correct bag listed is 20" x 20". Bag filters also have a special depth. The depth describes the length of the pockets. This is an exact size and is usually an even number. There are many other sizes available, and custom sizes can be made to order. There are also other efficiencies ranging from 45% through 95%. For additional sizes, UL Ratings or efficiencies, please contact customer service.

**PS125-Bag**

Scrim-Back polyester media bags as prefilter

PS125 Bags are made from a single denier polyester media that contains a scrim backing for extra rigidity. The PS125 Bags each contain a metal wire support and a 1 inch channel frame for easy placement.

The pricing chart lists each size by booth type. Custom sizes are available. Sizes are also listed in our booth guide for easy reference.

Pre-filter bags have an ever changing and diverse selection of types and sizes. Call customer service at any time to help with your selection.

**PS125-Sock**

The Spraybake Sock filter is made from a 1” single denier polyester media. The filter has a draw string sewn at the top, and a support loop at the bottom corner. The filter fastens to the ductwork by the drawstring. After fastening the support loop, the filter remains open and stable.

*Our filters are not affiliated with SPRAYBAKE®. Use of the registered SPRAYBAKE® name is for comparative purposes only.*
Kwik Kuts
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 spun glass, foam, expanded aluminum, plastic-backed foam and Permaire media.

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.

Permaire
Besides its cut-to-size advantage, Permaire is also more durable than disposable panel filters. It is easier to handle and install...you can carry several cut filters or even a roll to the job site. Bend or twist it to facilitate installation and it snaps back to its original shape. It has high dust holding capacity, offers inventory convenience and economy...AND it is washable for repeat use.

Hammock Rolls
Hammock style filter material is intended for furnaces equipped with “hammock” grids for frameless filters.

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
**Service Rolls**

The following media are offered as service rolls:

**Spun Glass:** This is a rigid, nominal 3/8 inch 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.

**Foam:** 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 inch, 1/2 inch, 1 inch and 2 inch media thicknesses. They are washable for repeat use.

**Aluminum:** The aluminum service roll is an expanded aluminum mesh of the type used in room unit air conditioners. It is a nominal 1/4 inch 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 & Pads**

Flanders Precisionaire hammock rolls are available in nominal 1 inch spun glass, 2 inch spun glass, and 1 inch polyester synthetic fiber media. Performance data on all Flanders Precisionaire 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 Precisionaire hammock rolls are packaged in a handy carton that can be used as a dispenser. Media used in all Flanders Precisionaire hammock rolls are UL Class 2 fire rated. The 1 inch spun glass is also available in pre-cut hammock pads, individually packaged in plastic.

**Permaire Rolls & 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 inch, 1 inch or 2 inch 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.
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.

Series 330G PA Green Paint Arrestor Glass (Models 330G-xxx) Model 330 Green glass is a 2.5” economical dry spun glass media for prep station and paint spraybooth applications.

Series 331Y PA Yellow Paint Arrestor Glass (Models 331Y-xxx) Model 331 is a heavy duty version of dry spun glass for prep station and paint spraybooth applications.

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


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.

SAR-1 (Models SAR1M-xxxxx) Nominal 1/2” or use as an intake blanket on crossdraft spraybooths.

SA600-G10 (Models SA600-xxx) Nominal 1” diffusion media for downdraft spraybooths.

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.
Flanders Precisionaire - Foremost in Air Filtration

Call Free: 1-800-347-2220
Flanders Precisionaire 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**
(models AEEx, 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, LRECxx)

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, BLCPx, 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, BLCTxx, CBTx, FPTx, CRPTx, CPTxx, AMPTx, TPTx, LRP Tx, 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.
<table>
<thead>
<tr>
<th>Rolls To Fit:</th>
<th>Filter Size &amp; Type</th>
<th>Size Number</th>
<th>Actual Size</th>
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<tbody>
<tr>
<td>American Air Filter Roll-O-Matic</td>
<td>2 2AE</td>
<td>23-3/4&quot; x 65'</td>
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<td>3, 33 3AE, 33AE</td>
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<td>4,45 4AE, 45AE</td>
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<td>6 6AE</td>
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<td>21 21AE</td>
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<td>22 22AE</td>
<td>22-1/4&quot; x 65'</td>
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<td>25 25AE</td>
<td>24-7/8&quot; x 65'</td>
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<td>26 26AE</td>
<td>24-7/8&quot; x 65'</td>
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<td>32 32AE</td>
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<td>4 BLCSP47</td>
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<td>6 BLCSP71</td>
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<td>4 4CB</td>
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<td>4, 40, 42 4F</td>
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<td>5, 50, 52 5F</td>
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<td>Air Maze (Roll A Maze)</td>
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<td>4 4AM</td>
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<td>5 5AM</td>
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<td>6 6AM</td>
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<td>Trane Company Roll Filters</td>
<td>RF 3, 7 3T</td>
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<td>RF 6, 9 6T</td>
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<td>RF 10, 17, 21 8T</td>
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<td>RF 12, 14, 24, 25 12T</td>
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<td>RF 31 31T</td>
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<td>RF 63 31T (2)</td>
<td>45-3/8&quot; x 65’(2)</td>
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<td>33&quot; x 65'</td>
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<td>6, 60 6L</td>
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<td>Mine Safety Appliances, Inc. (MSA)</td>
<td>20 20L</td>
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<td>46 46L</td>
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<td>56L</td>
<td>63&quot; X 65'</td>
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General
Flanders Precisionaire Pre Pleat 40 extended surface pleated filters are designed to operate in most every type of installation. Available in 1 in., 2 in., and 4 in. nominal thickness, these filters have an average atmospheric dust spot efficiency range of 25-30% per ASHRAE Standard 52.1 test methods. Pre Pleat 40 filters offer greater efficiency and service life than disposable filters, pad and frame systems, or metal washable filters. The overall design of this product makes these filters the accepted choice in applications requiring high performance and extended service.

These filters are suitable for variable air volume systems. Operating face velocity ranges are from 0 to 500 fpm for 1 in. and 2 in. filters, and from 0 to 625 fpm for 4 in. filters. Economy, Standard and High Capacity designs are offered. (Capacity is increased by the addition of pleats/media.)

Pre Pleat 40 filters are UL 900 Class 2 listed but are available with UL Class 1 listing.

Versatility
Most heating, air conditioning, or ventilating systems can be upgraded with the use of Pre Pleat 40 filters in place of existing flat panel types.

The inherent strength of the filter allows for easy changeout as it will not collapse, warp, or bend in normal service.

Pre Pleat 40 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
Pre Pleat 40 pleated filters are suitable as primary filters and can be installed in Type 9 Holding Frames, K-Trac Framing Modules, Surepleat Side Access Housings and similar existing hardware. They may be used as prefilters for Precision Pak, PrecisionCell and Rigid-Air filters in these framing systems and in Sureseal Side Access Housings.

PrePleat 40 “elements” and “rolls” are also offered. These are pleated sections of PrePleat 40 media in selected widths with the metal backing for use in a re-usabiole metal frame.

Physical Data
Media: High-loft, non-woven cotton/synthetic blend
Media Support: Diamond-shaped expanded metal
Pleat Design: V Pleat
Frame: Moisture-resistant carrier board

Important Features
• 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 ASHRAE efficiency is 25-30%
• Average arrestance is 90%-92%
Principles of Operation

Flanders Precisionaire’s v-pleat design insures that the greatest media area is exposed to the air flow to promote uniform dust loading. Competitive filters cannot maintain this rigid shape and tend to flatten out, using only a portion of the media. This v-pleat design creates an air exit area (B) equal to the air entering area (A), which minimizes end losses and reduces pressure drop.

Radial wedge pleats have unequal air exit (D) and air entering (C) areas, which cause higher resistance and uneven use of media.

Construction

Filter frames are constructed from two pieces of die-cut, moisture-resistant carrier board. Components “telescope” into one another and provide double-wall construction and a precision fit. The frame includes diagonal and horizontal support members bonded to the media on the air entering and leaving sides for unsurpassed frame strength. Locking corners and positive media-to-frame seal reduces the possibility of air bypass.

The filter media is a high-loft, reinforced, non-woven cotton/synthetic blend. It is continuously laminated to an expanded metal grid on the air leaving side to provide pleat stability throughout the life of the filters and prevent media flutter while in operation.

Flanders Precisionaire’s unique v-pleat wedge pleat allows for total media usage and provides maximum air flow and dust holding capacity.
## Performance Data

### Capacities and Dimensions

| Nominal Size H x W x D (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                           | | | | | | | | | |
| 10 x 10 x 1                 | 210 | 0.15 | 347 | 0.35 | 1.1 | 0.2 | 210 | 0.13 | 347 | 0.33 | 1.6 | 0.2 |
| 10 x 20 x 1                 | 417 | 0.15 | 694 | 0.35 | 2.2 | 0.3 | 417 | 0.13 | 694 | 0.33 | 3.2 | 0.4 |
| 12 x 20 x 1                 | 500 | 0.15 | 833 | 0.35 | 2.7 | 0.4 | 500 | 0.13 | 833 | 0.33 | 3.8 | 0.5 |
| 12 x 24 x 1                 | 600 | 0.15 | 1000 | 0.35 | 3.5 | 0.5 | 600 | 0.13 | 1000 | 0.33 | 4.5 | 0.6 |
| 14 x 20 x 1                 | 583 | 0.15 | 972 | 0.35 | 3.1 | 0.5 | 583 | 0.13 | 972 | 0.33 | 4.5 | 0.6 |
| 14 x 25 x 1                 | 729 | 0.15 | 1215 | 0.35 | 4.6 | 0.6 | 729 | 0.13 | 1215 | 0.33 | 5.3 | 0.7 |
| 15 x 20 x 1                 | 625 | 0.15 | 1042 | 0.35 | 3.3 | 0.6 | 625 | 0.13 | 1042 | 0.33 | 4.8 | 0.7 |
| 16 x 20 x 1                 | 667 | 0.15 | 1110 | 0.35 | 3.6 | 0.6 | 667 | 0.13 | 1110 | 0.33 | 4.8 | 0.7 |
| 16 x 25 x 1                 | 834 | 0.15 | 1390 | 0.35 | 4.6 | 0.7 | 834 | 0.13 | 1390 | 0.33 | 6.1 | 0.8 |
| 20 x 20 x 1                 | 834 | 0.15 | 1390 | 0.35 | 4.6 | 0.7 | 834 | 0.13 | 1390 | 0.33 | 6.1 | 0.8 |
| 18 x 24 x 1                 | 900 | 0.15 | 1500 | 0.35 | 4.8 | 0.7 | 900 | 0.13 | 1500 | 0.33 | 6.9 | 0.9 |
| 18 x 25 x 1                 | 945 | 0.15 | 1575 | 0.35 | 5.0 | 0.7 | 945 | 0.13 | 1575 | 0.33 | 7.2 | 0.9 |
| 20 x 24 x 1                 | 1042 | 0.15 | 1735 | 0.35 | 5.5 | 0.8 | 1042 | 0.13 | 1735 | 0.33 | 7.6 | 1.0 |
| 20 x 25 x 1                 | 1200 | 0.15 | 2000 | 0.35 | 6.4 | 0.9 | 1200 | 0.13 | 2000 | 0.33 | 8.9 | 1.1 |
| 2                           | | | | | | | | | |
| 10 x 20 x 2                 | 417 | 0.12 | 694 | 0.27 | 4.5 | 0.6 | 417 | 0.11 | 694 | 0.25 | 6.4 | 0.8 |
| 12 x 20 x 2                 | 500 | 0.12 | 833 | 0.27 | 5.3 | 0.7 | 500 | 0.11 | 833 | 0.25 | 7.7 | 0.9 |
| 12 x 24 x 2                 | 600 | 0.12 | 1000 | 0.27 | 5.8 | 0.8 | 600 | 0.11 | 1000 | 0.25 | 8.7 | 1.0 |
| 14 x 20 x 2                 | 583 | 0.12 | 972 | 0.27 | 6.2 | 0.8 | 583 | 0.11 | 972 | 0.25 | 8.9 | 1.0 |
| 14 x 25 x 2                 | 729 | 0.12 | 1215 | 0.27 | 7.8 | 1.0 | 729 | 0.11 | 1215 | 0.25 | 11.2 | 1.2 |
| 15 x 20 x 2                 | 625 | 0.12 | 1042 | 0.27 | 6.7 | 0.8 | 625 | 0.11 | 1042 | 0.25 | 9.6 | 1.0 |
| 16 x 20 x 2                 | 667 | 0.12 | 1110 | 0.27 | 7.0 | 0.9 | 667 | 0.11 | 1110 | 0.25 | 10.1 | 1.1 |
| 16 x 25 x 2                 | 834 | 0.12 | 1390 | 0.27 | 8.3 | 1.1 | 834 | 0.11 | 1390 | 0.25 | 12.4 | 1.3 |
| 18 x 24 x 2                 | 900 | 0.12 | 1500 | 0.27 | 9.6 | 1.2 | 900 | 0.11 | 1500 | 0.25 | 13.8 | 1.5 |
| 18 x 25 x 2                 | 938 | 0.12 | 1563 | 0.27 | 10.3 | 1.3 | 938 | 0.11 | 1563 | 0.25 | 14.4 | 1.6 |
| 20 x 20 x 2                 | 834 | 0.12 | 1390 | 0.27 | 8.3 | 1.1 | 834 | 0.11 | 1390 | 0.25 | 12.4 | 1.3 |
| 20 x 24 x 2                 | 1000 | 0.12 | 1667 | 0.27 | 10.7 | 1.3 | 1000 | 0.11 | 1667 | 0.25 | 15.3 | 1.6 |
| 20 x 25 x 2                 | 1042 | 0.12 | 1735 | 0.27 | 10.3 | 1.3 | 1042 | 0.11 | 1735 | 0.25 | 15.5 | 1.6 |
| 24 x 24 x 2                 | 1200 | 0.12 | 2000 | 0.27 | 12.3 | 1.5 | 1200 | 0.11 | 2000 | 0.25 | 17.8 | 1.8 |
| 25 x 25 x 2                 | 1300 | 0.12 | 2170 | 0.27 | 13.3 | 1.6 | 1300 | 0.11 | 2170 | 0.25 | 19.2 | 1.9 |
| 25 x 29 x 4                 | 1500 | 0.10 | 2170 | 0.27 | 13.3 | 1.6 | 1500 | 0.11 | 2170 | 0.25 | 21.5 | 1.9 |

**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 1/8 in. under for all nominal 1 in. deep filters. Actual filter depth is 1/4 in. under for all nominal 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 stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
The Pre Pleat Series of Pleated Air filters

Pre Pleat Class 1 air filters are designed for applications where a UL Class 1 fire rated filter is required and metal frames are unsuitable.

Pre Pleat HT air filters are designed for applications where the temperatures reach up to 400°F.

62R high efficiency pleated air filters contain an electrostatically charged filtration media which has a higher dust holding capacity.

Pre Pleat HV air filters are designed to operate in high velocity and turbulent air applications where standard pleated filters tend to fail.

Guide Specifications

1.0 General
1.1 Medium efficiency filters shall be Pre Pleat 40 extended surface pleated filters as manufactured by Flanders Precisionaire.
1.2 Filter sizes and capacities shall be as scheduled on the drawings.
1.3 Filters shall be UL 900 Class 1 or 2 listed.

2.0 Filter Construction
2.1 Filters shall be constructed of reinforced, non-woven cotton/synthetic blend media laminated to an expanded metal grid on the air leaving side and formed into v-configuration pleats.
2.2 Frame shall be moisture-resistant board with diagonal and horizontal support members on the upstream and downstream sides, and shall have locking corners.

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 atmospheric dust spot efficiency shall be 25-30% as determined by 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 850.
General
The Pre Pleat HV pleated filter from Flanders Precisionaire 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.

Construction
A heavy-duty die-cut moisture resistant frame encloses the media pack. The media is manufactured of 100% electrostatically charged synthetic fibers that attract and hold airborne particulate contaminants. The media is bonded to a zinc coated, 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
## Guide Specifications

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

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 50% 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.

### Nominal Size

<table>
<thead>
<tr>
<th>Nominal Depth (in.)</th>
<th>Nominal Size H x W x D (in.)</th>
<th>300 fpm</th>
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<th>Media Area (sq. ft.)</th>
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<td></td>
<td></td>
<td>cfm</td>
<td>PD</td>
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Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
Filtration for IAQ
Flanders Precisionaire Pre Pleat 62R pleated panel air filter was specifically designed to improve indoor air quality through a new level of particulate filtration. The filter takes its name from the ASHRAE Standard 62 which addresses indoor air quality. The Pre Pleat 62R is indeed state of the art.

Electrostatically Charged Media
The Pre Pleat 62R features a 100% synthetic electrostatically charged filtration media, which actively attracts and holds airborne contaminants. The filter media is bonded to a corrosion resistant expanded metal backing. This combination is then folded into an accordion pleat arrangement and sealed within a moisture resistant frame.

The Pre Pleat 62R is more efficient when compared to standard pleated filters and has a high dust holding capacity that does not sacrifice airflow. Initial resistance of a 2 in. deep filter is just 0.3 in. w.g. at 500 fpm. Dust holding capacity of a 24x24x2 in. high capacity filter is 181 grams at 1 in. w.g. final resistance.

Important Features
• MERV 8 per ASHRAE Standard 52.2
• 1 in., 2 in. or 4 in. depths
• All standard sizes plus custom sizes
• Standard and high capacity designs
• UL Class 2 listed
PrePleat Elements and Rolls

PrePleat “elements” and “rolls” are also offered. These are pleated sections of PrePleat in selected widths with the metal backing but without the frame. They are designed for use in a re-usablen metal frame.

1.0 General

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

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 pullaway.

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, Standard 900 as Class 2.

3.0 Performance

3.1 The filter shall have a Minimum Efficiency Reporting Value of 8 by ASHRAE Standard 52.2.
Pre Pleat 62RM11
(Merv 11 (60-65% per Ashrae 52.1-1992)

Pre Pleat 62RM11 pleated panel filter enables a significant upgrade in collection efficiency over existing MERV 8 products at the same resistance levels. From 30-35% to 60-65% average per Ashrae 52.1-1992 average dust spot efficiency at nearly the same pricing levels.

**Bi-component media:** Our next-generation ultra-high performance bi-component synthetic media contains mechanically engineered trilobal 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 throughput 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 Precisionaire’ 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 highly charged secondary model. This equals the same resistance level of our PrePleat 40 62R Merv 8 Pleat.

No competitor in the marketplace can match these performance levels which are substantiated with independent testing. Flanders Precisionaire is the first in the marketplace with this new proprietary product.

**Resistance:**
Airflow resistance of a High Capacity PrePleat 62R M11 is .30” wg @ 2000 CFM (500 FPM) Standard Capacity is .34” wg @ 2000 CFM.

**Efficiency:**
1.3 to 1.6 microns    63% removal efficiency
7-10 microns         90% removal efficiency

- 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.

Flanders Precisionaire - Foremost in Air Filtration
Corporate Headquarters, St. Petersburg, FL
1.0 General
1.1 Air filters shall be Model Pre Pleat 62RM11 panel filters, as manufactured by Flanders Precisionaire.

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 pullaway.

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, Standard 900 as Class 2.

3.0 Performance
3.1 The filter shall have a Minimum Efficiency Reporting Value of 11 by ASHRAE Standard 52.2.
Pre Pleat Class 1
UL 900 Class 1 Pleated Filter

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.

<table>
<thead>
<tr>
<th>Size</th>
<th>St. Cap. @ 300 fpm</th>
<th>Std. Cap. @ 300 fpm</th>
<th>High Cap. @ 300 fpm</th>
<th>High Cap. @ 500 fpm</th>
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<tr>
<td>12x24x2</td>
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<td>.30</td>
<td>.50</td>
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</tr>
<tr>
<td>24x24x2</td>
<td>1200</td>
<td>.36</td>
<td>.30</td>
<td>.50</td>
</tr>
</tbody>
</table>

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

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

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.
Pre Pleat HT
High Temperature Pleated Filters

Up to 400°F

Flanders Precisionaire Pre Pleat HT filters are designed for increased air filtration efficiencies in an operating environment where temperatures reach 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 ga corrosion resistant metal frame with an expanded corrosion resistant metal face screen on the downstream side to increase pack rigidity while preventing blowouts. Flanders Precisionaire Pre Pleat high temperature pleated air filters are offered in two inch depths in all of the most popular face sizes.

Pre Pleat HT air filters 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 ga. corrosion resistant steel
Media: 50% Efficient micro-fine fiberglass
Pleat Design: V-wedge Pleat
Face Screen: Expanded metal corrosion resistant steel

Important Features

• Resists temperatures up to 400°F
• Nominal 50% ASHRAE efficiency
• Rugged metal construction
• UL 900 Class 1 Fire Rated
1.0 General

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

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.
General
Flanders Precisionaire E35 extended surface pleated filters are designed to operate in most installations. Available in 1 in., 2 in., and 4 in. nominal thickness, these filters have an average atmospheric dust spot efficiency range of 25-30% per ASHRAE Standard 52.1 test methods. E35 filters offer greater efficiency and service life than disposable filters, pad and frame systems, or metal washable filters. The overall design of this product makes E35 filters the accepted choice in applications requiring high performance and extended service.

These filters are suitable for variable air volume systems. Operating face velocity ranges are from 0 to 500 fpm for 1 in. and 2 in. filters, and from 0 to 625 fpm for 4 in. filters. Each filter contains 11 pleats per lineal foot. E35 filters are UL 900 Class 2 listed.

Versatility
Most heating, air conditioning, or ventilating systems can be upgraded with the use of E35 filters in place of existing flat panel types. The inherent strength of the filter allows for easy changeout as it will not collapse, warp, or bend in normal service. E35 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 E35 filter to existing filter banks.

Installation Considerations
E35 pleated filters are suitable as primary filters and can be installed in Type 9 Holding Frames, K-Track Framing Modules, Surepleat Side Access Housings and similar existing hardware. They may be used as prefilters for Flanders Precisionaire Precision Pak, PrecisionCell and Rigid-Air filters in these framing systems and in Sureseal Side Access Housings.

Construction
E35 filter frames are constructed from moisture resistant chipboard. Perforated steel support grilles on the upstream and downstream sides provide extra rigidity and strength. The entire unit is sealed to insure a positive media-to-frame bond, eliminating the possibility of air bypass. The filter media is a high loft reinforced non-woven cotton/synthetic blend. It is continuously laminated to an expanded metal grid on the air leaving side to provide pleat stability throughout the life of the filter and to prevent media flutter while in operation. The E35 radial wedge pleat allows for total media usage and provides maximum airflow and dust holding capacity.

Important Features
- V-wedge pleats minimize end losses and reduce pressure drop.
- Expanded metal grid prevents media flutter while in operation.
- Perforated steel support grilles strengthen the frame.
- Filter media pack is sealed to eliminate air bypass.
- Average ASHRAE efficiency is 25-30%.
### Capacities and Dimensions

<table>
<thead>
<tr>
<th>Nominal Depth (in.)</th>
<th>Model Number</th>
<th>Nominal Size HxWxD (in.)</th>
<th>375 fpm cfm</th>
<th>500 fpm cfm</th>
<th>PD</th>
<th>Media Area (sq. ft)</th>
<th>Weight Each (lbs.)</th>
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<td>.30</td>
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</table>

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.

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

### Guide Specifications

1. **General**
   1.1 Medium efficiency pleated filters shall be E35 as manufactured by Flanders Precisionaire Precisionaire.
   1.2 Filters shall be UL 900 Class 2 listed.

2. **Filter Construction**
   2.1 Filters shall be constructed of reinforced, non-woven cotton/synthetic blend media laminated to an expanded metal grid on the air leaving side and formed into V-wedge pleats.
   2.2 Frames shall be moisture-resistant chipboard with perforated steel support grilles on the upstream and downstream sides.

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

Flanders Precisionaire - Foremost in Air Filtration

Call Free: 1-800-347-2220
Capture microscopic particles.
As many as 99% of the particles in the air we breathe are smaller than 1 micron in size. The Microparticle filter from Flanders is specially designed to capture these tiny, breathable particles that ordinary filters miss.

Filters by electrostatic attraction.
The basic design of the Microparticle air filter is similar to other pleated panel filters. The difference is in the filtration medium. Most pleated panels use spun glass or a cotton/polyester blend as filtration media. On large particles, these media do just fine. The Flanders Microparticle filter, on the other hand, utilizes a special synthetic medium which has an innate electrostatic charge. It is this electrostatic charge that grabs and holds the tiny, submicron size particles that other filters miss.

Fractional efficiency.
Sophisticated new particle counters give an indication of how well filter media perform on differing particle sizes. The chart on the left shows the comparative effectiveness of the Microparticle filter on four particle size ranges. And listed below are a few common airborne contaminants with their sizes.

5 MICRONS: Pollen, Mold
1 TO 5 MICRONS: Bacteria, Insecticide Dust, Fly Ash, Hair Spray, Carbon Black, Lead Dust, Coal Dust, Road Dust
.1 to 1 MICRONS: Tobacco Smoke, Metallurgical Dusts and Fumes, Sea Salt, Wood Smoke, Cooking Oil Fumes.

Key Features
• Catches even submicron size particles
• Charged filtration medium
• Disposable
• Rugged Construction
• 1”, 2” and 4” depths
• All standards and nearly any custom size
Guide Specifications

1.0 General
1.1 Medium efficiency pleated filters shall be Microparticle as manufactured by Flanders Precisionaire.
1.2 Filters shall be UL 900 Class 2 listed

2.0 Filter Construction
2.1 Filters shall be constructed of an electrostatically charged synthetic only filter medium laminated to an expanded metal grid on the air leaving side and formed into radial wedge pleats.
2.2 Frames shall moisture resistant die-cut board with diagonal support members on the upstream and downstream sides.

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.
General
These are filters that have been treated with genuine Arm & Hammer® Baking Soda to provide odor removal as well as particle filtration. These products are shrink-wrapped in plastic with retail point of sale information. Three versions are offered:

Arm & Hammer® ELITE
Nominal 1” depth filter. An electrostatic filtering medium treated with Arm & Hammer® Baking Soda is micropleated up to 4 times the surface area of a standard flat panel. It is then encased and sealed within a moisture resistant coated board frame. Filtration efficiency of MERV 12.

Arm & Hammer® Microparticle
Nominal 1” depth filter. An electrostatic filtering medium treated with Arm & Hammer® Baking Soda is adhered to an expanded metal backing and pleated then encased and sealed within a moisture resistant coated board frame. Filtration efficiency of MERV 10.

Arm & Hammer® STANDARD
Nominal 1” depth filter. A cotton/polyester filtering medium treated with Arm & Hammer® Baking Soda is adhered to an expanded metal backing and pleated, then encased and sealed within a moisture resistant coated board frame. Filtration efficiency of MERV 8.

Important Features:
Arm & Hammer® Elite
- Micro pleating provides four times the media surface as flat panel filter & three times that of a standard pleat
- Up to 70 times more effective than spun glass on sub micron sized particles
- Designed to provide allergy relief AND odor control
- Made with real Arm & Hammer® Baking Soda, proven to remove various odors
- Low airflow resistance for better equipment operation and to help save energy
- Electrostatically charged media
- Lasts up to 90 days

Arm & Hammer® Microparticle:
- Pleated for about twice the surface area of flat panel filters
- Up to 45 times more effective than spun glass on sub micron sized particles.
- Designed to provide Allergy Relief AND Odor Control
- Made with real Arm & Hammer® Baking Soda, proven to remove various odors
- Low airflow resistance for better equipment operation and to help save energy
- Electrostatically charged fibers
- Lasts up to 90 Days

Arm & Hammer® Standard
- Pleated for about twice the surface area of flat panel filters
- Up to 15 times more effective than spun glass on sub micron sized particles
- Designed to provide Allergy Relief AND Odor Control
- Made with real Arm & Hammer® Baking Soda, proven to remove various odors
- Low airflow resistance for better equipment operation and to help save energy
- Lasts up to 90 Days
General

These are filters that have been treated with Lysol® anti-microbial to help prevent growth of odor-causing bacteria, then shrink-wrapped in plastic with retail point of sale information. Three versions are offered:

**Lysol® ELITE**
Nominal 1” depth filter. An electrostatic filtering medium is micropleated up to 4 times the surface area of a standard flat panel. It is then encased and sealed within a moisture resistant coated board frame. Filtration efficiency of MERV 12.

**Lysol® PLUS**
Nominal 1” depth filter. An electrostatic filtering medium is adhered to an expanded metal backing and pleated then encased and sealed within a moisture resistant coated board frame. Filtration efficiency of MERV 10.

**Lysol® STANDARD**
Nominal 1” depth filter. A cotton/polyester filtering medium is adhered to an expanded metal backing and pleated, then encased and sealed within a kraftboard frame. Filtration efficiency of MERV 8.

---

**Important Features:**

**Lysol Elite**
- Micro pleating provides four times the media surface as flat panel filter & three times that of a standard pleat
- Added layer of Antimicrobial protection on filter helps prevent growth of odor causing bacteria
- Up to 70 times more effective than spun glass on sub micron sized particles
- Electrostatically charged media. Designed to provide allergy relief
- Low airflow resistance for better equipment operation and to help save energy
- Lasts up to 90 days

**Lysol Plus:**
- Pleated for about twice the surface area of flat panel filters
- Added layer of Antimicrobial protection on filter helps prevent growth of odor causing bacteria
- Up to 45 times more effective than spun glass on sub micron sized particles
- Electrostatically charged fibers. Designed to provide allergy relief
- Low airflow resistance for better equipment operation and to help save energy
- Lasts up to 90 Days

**Lysol Standard**
- Pleated for about twice the surface area of flat panel filters
- Added layer of Antimicrobial protection on filter helps prevent growth of odor causing bacteria
- Provides up to 15 times more filtration effectiveness than ordinary spun glass filters
- Lasts up to 90 days

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
**General**

Superflow-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. Superflow-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. Superflow-V filters are UL 900 Class 2 listed.

**Construction**

Superflow-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. Superflow-V filters are totally rigid making them ideal for variable air volume (VAV) systems, as well as applications downstream of supply fans.

**Lowest Pressure Drop**

Superflow-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**

The ratio of media area to nominal face area of Superflow-V filters is an extremely high 48:1, resulting in a much longer service life than most any filter of comparable efficiency and depth. 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

---

Flanders Precisionaire - Foremost in Air Filtration

Call Free: 1-800-347-2220
### 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. Maximum final pressure drop is 3.2 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 65, 85, 95 and 98% filters. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
4. Performance tolerances conform to section 7.4 of ARI Standard 850.
5. Actual filter header is 5/16 inch under on height and width. Actual depth is 11-1/2 inch.

### Installation Considerations

Superflow-V filters may be installed in Flanders Type 9 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings or in similar existing hardware. Type 9 Holding 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. Gasketed Headers are Standard.

Superflow-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.

---

**Table: Performance Data**

<table>
<thead>
<tr>
<th>Efficiency</th>
<th>Model Number</th>
<th>Nominal Size HxWxD Inches</th>
<th>250 FPM</th>
<th>375 FPM</th>
<th>500 FPM</th>
<th>625 FPM</th>
<th>750 FPM</th>
<th>Media Area (Sq.Ft)</th>
<th>WL Each (Lbs.)</th>
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</thead>
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<tr>
<td>95% DOP SFVD-95A12</td>
<td>24 x 24 x 12</td>
<td>1000 0.28</td>
<td>1500 0.55</td>
<td>2000 0.75</td>
<td>2500 0.80</td>
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<td>*</td>
<td>196</td>
<td>18</td>
</tr>
<tr>
<td>95% DOP SFVD-95B12</td>
<td>20 x 24 x 12</td>
<td>800 0.28</td>
<td>1200 0.55</td>
<td>1600 0.75</td>
<td>2000 0.80</td>
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<td>*</td>
<td>162</td>
<td>14</td>
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<td>500 0.28</td>
<td>750 0.55</td>
<td>1000 0.75</td>
<td>1250 0.80</td>
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<td>1500 0.45</td>
<td>2000 0.60</td>
<td>2500 1.0</td>
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<td>*</td>
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<td>17</td>
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<td>20 x 24 x 12</td>
<td>800 0.25</td>
<td>1200 0.45</td>
<td>1600 0.60</td>
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<td>750 0.45</td>
<td>1000 0.60</td>
<td>1250 1.0</td>
<td>*</td>
<td>*</td>
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<td>8</td>
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<tr>
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<td>24 x 24 x 12</td>
<td>1000 0.14</td>
<td>1500 0.27</td>
<td>2000 0.36</td>
<td>2500 0.51</td>
<td>3000 0.64</td>
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<td>17</td>
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<td>20 x 24 x 12</td>
<td>800 0.14</td>
<td>1200 0.27</td>
<td>1600 0.36</td>
<td>2000 0.51</td>
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<td>12 x 24 x 12</td>
<td>500 0.14</td>
<td>750 0.27</td>
<td>1000 0.36</td>
<td>1250 0.51</td>
<td>1500 0.64</td>
<td>98</td>
<td>8</td>
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**Table: Guide Specifications**

**1.0 General**

1.1 Medium and high efficiency extended surface low pressure drop minipleat filters shall be Superflow-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 encased in a corrosion-resistant steel frame.

**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 test methods.

3.4 Filters shall be UL 900 Class 2 listed.
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, now available in either plastic or metal styles. 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 test methods.

These filters are especially suitable for variable air volume systems. Operating face velocity ranges are from 0 to 375 fpm for 6 in. deep filters, and from 0 to 675 fpm for 12 in. deep filters. Two frame styles are available: a single 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 Type 9 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings or in similar existing hardware. Type 9 Holding Frames are riveted together to form a bank and may be installed for upstream or downstream service. 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.

The headered version should be selected for use with the hardware listed above. If the filter is to be installed so that it protrudes upstream of the Type 9 Holding Frame, the box style filter is required.

Physical Data

Frame: 24 ga. corrosion resistant steel
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 in. wide 26 ga. corrosion resistant steel
Operating Limits: 180° F 100% RH %
Actual Header or Box Filter Face Size: Nominal size less 5/8 in. (e.g., a nominal 24 in. x 24 in. filter is actually 23 3/8 in. x 23 3/8 in.)
Actual Depth: 5-7/8 in. or 11-1/2 in.
### Rigid-Air Box Type Filters

<table>
<thead>
<tr>
<th>Nominal Depth (in.)</th>
<th>Efficiency</th>
<th>Nominal Size H x W x D (in.)</th>
<th>250 fpm cfm</th>
<th>PD</th>
<th>375 fpm cfm</th>
<th>PD</th>
<th>500 fpm cfm</th>
<th>PD</th>
<th>625 fpm cfm</th>
<th>PD</th>
<th>Media Area (sq. ft.)</th>
<th>Weight Each (lbs.)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>90-95%</td>
<td>24 x 24 x 12 24 x 12 x 12</td>
<td>1000 500</td>
<td>.24</td>
<td>1500 750</td>
<td>.44</td>
<td>2000 1000</td>
<td>.66</td>
<td>2500 1250</td>
<td>.90</td>
<td>58</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>80-85%</td>
<td>24 x 24 x 12 24 x 12 x 12</td>
<td>1000 500</td>
<td>.20</td>
<td>1500 750</td>
<td>.34</td>
<td>2000 1000</td>
<td>.51</td>
<td>2500 1250</td>
<td>.70</td>
<td>58</td>
<td>19</td>
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<td>60-65%</td>
<td>24 x 24 x 12 24 x 12 x 12</td>
<td>1000 500</td>
<td>.13</td>
<td>1500 750</td>
<td>.24</td>
<td>2000 1000</td>
<td>.36</td>
<td>2500 1250</td>
<td>.49</td>
<td>58</td>
<td>19</td>
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<td>50-55%</td>
<td>24 x 24 x 12 24 x 12 x 12</td>
<td>1000 500</td>
<td>.10</td>
<td>1500 750</td>
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<td>6</td>
<td>90-95%</td>
<td>24 x 24 x 6 24 x 12 x 6</td>
<td>1000 500</td>
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<td>24 x 24 x 6 24 x 12 x 6</td>
<td>1000 500</td>
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<td></td>
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</tr>
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<td>60-65%</td>
<td>24 x 24 x 6 24 x 12 x 6</td>
<td>1000 500</td>
<td>.25</td>
<td>1500 750</td>
<td>.42</td>
<td>2000 1000</td>
<td>.60</td>
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<td>14</td>
</tr>
<tr>
<td></td>
<td>50-55%</td>
<td>24 x 24 x 6 24 x 12 x 6</td>
<td>1000 500</td>
<td>.13</td>
<td>1500 750</td>
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<td>2000 1000</td>
<td>.35</td>
<td>2500 1250</td>
<td>.45</td>
<td>29</td>
<td>14</td>
</tr>
</tbody>
</table>

Notes:
1. PD represents clean pressure drop in inches w.g. Recommended final pressure drop for all models is 1.5 inches w.g.
2. Operation down to zero airflow is satisfactory for all models.
3. Consult factory before operating at these velocities.
4. Efficiency is average and is based on ASHRAE Standard 52.1 test methods.
5. Performance tolerances conform to Section 7.4 of ARI Standard 850.
6. Actual filter face size is 5/8 in. under on height and width. Actual filter depth is 5-7/8 in. or 11-1/2 in.
7. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

---

Rigid Air is now available with new ALL METAL pleat supports.

---

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
**Rigid Air Filters with Header**

<table>
<thead>
<tr>
<th>Nominal Depth (in.)</th>
<th>Efficiency</th>
<th>Nominal Size H x W x D (in.)</th>
<th>250 cfm</th>
<th>375 cfm</th>
<th>500 cfm</th>
<th>625 fpm</th>
<th>Media Area (sq. ft.)</th>
<th>Weight Each (lbs.)</th>
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</thead>
<tbody>
<tr>
<td>12</td>
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<td>24 x 24 x 12</td>
<td>1000</td>
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**Notes:**

1. PD represents clean pressure drop in inches w.g. Recommended final pressure drop for all models is 1.5 inches w.g.
2. Operation down to zero airflow is satisfactory for all models.
3. Consult factory before operating at these velocities.
4. Efficiency is average and is based on ASHRAE Standard 52.1 test methods.
5. Performance tolerances conform to Section 7.4 of ARI Standard 850.
6. Actual filter header face size is 5/8 in. under on height and width. Actual depth is 5-7/8 in. or 11-1/2 in.
7. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
Application Guidelines
Rigid-Air filters may be used wherever job requirements and available space will accommodate 6 in. or 12 in. deep filters.

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

Rigid-Air filters should be installed with pleats vertical wherever possible. It is permissible to install 24 in. x 12 in. face size cartridges with pleats horizontal if necessary to meet the size requirements of the filter bank.

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

Hospital Applications
Rigid-Air filters may be used on the downstream side of the supply fan in hospitals if they are far enough from the fan so that the high fan discharge velocity will not affect them. Rigid-Air rigid filters can withstand adverse air flow conditions better than bag filters and are the preferred selection for these applications.

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

To specify headered version Rigid-Air filters with gasketed headers, add suffix “S” or “H” to the model number. Example:

Model Number - S: Gaskets are on the sides parallel to the pleats.
Model Number - H: Gaskets are on the sides perpendicular to the pleats.

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

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
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 are available in standard and high capacity versions.

These filters are suitable for variable air volume systems. 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 900 Class 1 listed.

Installation Considerations
PrecisionCell rigid filters may be installed in Flanders Precisionaire Type 9 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings, or in similar existing hardware.

Type 9 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.

The single header version should be selected for use with hardware framing systems and side access housings. If the filter is installed so that it protrudes upstream of the Type 9 Holding Frame, the double header filter is required.

Construction Options
PrecisionCell filters are designed for temperatures up to 350 degrees Fahrenheit. For high temperature or gas turbine models, see PrecisionCell GT and HT bulletins.

Physical Data
Frame: 24 ga. corrosion-resistant steel
Media: Moisture-resistant micro-fine fiberglass
Separators: Hemmed corrugated aluminum
Headers: 13/16 ” wide corrosion-resistant steel
Operating Limits: 100% RH and 350º F
Actual Face: Nominal size less 5/8”
Actual Depth: 5-7/8” or 11-1/2”

Important Features
• Rugged galvanized 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.
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 practice require that the filters be downstream of coils.

Gasketed Headers

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

To specify filters with gasketed headers, add suffix “S” to “H” to the model number as follows:

Model Number - S: Gaskets are on the sides parallel to the separators.

Model Number - H: Gaskets are on the sides perpendicular to the separators.

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 Precisionaire.

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 ga. 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 Filters shall be UL 900 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 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.
General

PrecisionCell II extended surface minipleat rigid filters are a nominal four inches deep. 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.

PrecisionCell II filters are especially suitable for variable air volume systems and are designed to operate at face velocities up to 625 fpm. Two 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 (see Optional Model). PrecisionCell II filters are UL 900 Class 2 listed.

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 in. 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 in. to 36 in. deep filters. Their nominal 4 in. 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 Precisionaire Type 9 Holding Frames and Surepleat Side Access Housings or similar existing hardware. Type 9 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: Double-wall, moisture-resistant beverage board
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

• Available in nominal 65%, 85%, and 95% ASHRAE efficiencies
• Space-saving 4 in. 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
Construction
In the Flanders Precisionaire tradition of state-of-the-art technology, PrecisionCell II filters are built with a minipleat media pack to achieve a rugged, compact lightweight, high efficiency filter.

Surepleat Side Access Housings
Use a Surepleat Side Access Housing as a convenient and space-saving method of installing PrecisionCell II filters. SP2/4 housings have two gasketed extruded aluminum tracks to accept 2 in. pleated prefilters and 4 in. PrecisionCell II final filters.

The adjacent photo shows a Surepleat Side Access Housing with 2 in. Prepleat 40 pleated prefilters and PrecisionCell II final filters.
Prefilters
Prefilters are always a wise choice for the protection of minipleat filters no matter what the efficiency or brand. The closely-spaced pleats are subject to face-loading (bridging) by lint and coarse particles, thus reducing their usual long life. A minimum 25-30% ASHRAE efficiency pleated panel filter such as the Flanders Precisionaire Prepleat 40 is recommended.

Save In-Line Space
Compare the airway lengths of 22 in. PrecisionPak bag filters and 12 in. Rigid-Air filter to a 4 in. PrecisionCell filter when they are installed with 2 in. prefilters.

VAV Systems
Filter banks should be sized so that the face velocity at maximum design conditions is 625 fpm or less. PrecisionCell II filters may be applied at any capacity between 0 and 625 fpm. Operating a filter bank at reduced flow will greatly increase expected filter life.

Save Storage Space and Shipping Costs
Using the 24 in. x 24 in. size as an example, a carton of four PrecisionCell II 4 in. filters has a volume of 5.3 cubic feet and a weight of 26 lbs. Compare this to four 12 in. deep rigid separator-type filters packed in four cartons with a total volume of 16 cubic feet and total weight of 80 lbs.

Application Guidelines
PrecisionCell II filters should be selected for new installations with 24 in. H x 24 in. W and 24 in. H x 12 in. W face sizes. These are the most widely used and stocked sizes. This allows for 12 in. 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 in. H x 12 in. W face size filters with pleats horizontal if necessary to meet the size requirements of the filter bank.

HEPA Prefilters
PrecisionCell II filters are ideal as prefilters for Alpha Cell HEPA filters. Their light weight and 4 in. 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 in. wide prefilter track for the PrecisionCell II filters, in lieu of the 2 in. wide prefilter track for pleated panel filters. We recommend the selection of 80-85% PrecisionCell II filters as HEPA prefilters.
1. PD represents clean pressure drop in inches w.g. Recommended final pressure drop for all models is 1.5 in. w.g.

2. Operation down to zero air flow is satisfactory for all models.

3. Actual filter face size of 24 in. x 24 in. and 24 in. x 12 in. is 5/8 in. undercut on height and width. All other sizes are 1/2 in. undercut on height and width. Actual filter depth is 3-3/4 in.

4. Efficiency is average and is based on ASHRAE Standard 52.1 test methods.

5. Performance tolerances conform to Section 7.4 of ARI Standard 850.

6. PrecisionCell II 24 in. x 12 in. filters are available with notches on the 24 in. horizontal sides. Contact factory to order.

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

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### Capacities and Dimensions

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<th>Media Area (sq. ft.)</th>
<th>Weight Each (lbs.)</th>
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### Other Standard Size PrecisionCell II Filters

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### Guide Specifications

#### 1.0 General
1. Medium and high efficiency extended surface filters shall be PrecisionCell II minipleat panel filters as manufactured by Flanders Precisionaire, Inc.

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

3. Filters shall be UL 900 Class 2 listed.

#### 2.0 Filter Construction
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. The filter pack shall be strengthened on the air entering and air exit sides with horizontal and diagonal support members.

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

#### 3.0 Performance
1. Initial and final resistances shall not exceed the scheduled values.

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

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

4. The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.
General
EA Series Replacement Air Filters are pre-formed, extended surface deep-pleated cartridges for use with existing hardware in commercial and industrial HVAC systems. EA Series filters are available in average efficiency ranges of 25-30%, 50-55%, 80-85% and 90-95% when tested according to ASHRAE Standard 52.1 methods. EA Series filters are UL 900 listed Class 2.

Construction
EA filter media is a non-woven cotton and synthetic blend (25% efficient) or moisture-resistant micro-fine lofted glass fiber (55%, 85% or 95% efficient). The media is reinforced with a non-woven remay backing and formed into a “pack” which is then hot-melt bonded top and bottom to 1/16 inch thick stiff moisture-resistant fiberboard panels. Alignment of the pleats in the media pack is carefully controlled during the bonding operation to facilitate insertion of the cartridge into the wire media retainer during installation. The completed filter is folded before being boxed to minimize shipping and storage volume.

Application
EA Series cartridge filters are designed to be used only in existing hardware as pictured below. This hardware consists of metal holding frames, sealer frames and wire basket-type retainers that may be used in either front or rear-loading built-up filter banks or side access housings.

EA Cartridge Disposable Replacement Air Filters are fully interchangeable with other manufacturers’ cartridge filters and hardware. Units of one efficiency may be replaced in the same system hardware with similar size and depth units of another efficiency. When upgrading efficiencies, be sure to check the capability of the fan to overcome the increased pressure drop.

Physical Data
- **Media**: Non-woven cotton and synthetic blend or moisture-resistant micro-fine lofted glass fiber reinforced with remay backing
- **Panels**: Top and bottom; 1/16 inch thick fiber board
- **Adhesive**: Hot-melt thermoplastic
- **Operating Limits**: 180° F.

Important Features
- Fully interchangeable with other manufacturer’s hardware.
- Heavy-duty fiberboard side panels.
- Filters are UL 900 Class 2 listed.
1. Efficiency is average when tested per ASHRAE Standard 52.1 methods.
2. Listed pressure drop is for a clean filter. Recommended final pressure drop is 1.0 in. w.g. for all models.
3. Performance tolerances conform to Section 7.4 of ARI Standard 850.
4. Special sizes are not available.
5. EA cartridge hardware is not available.
6. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

1.0 General
1.1 Filters shall be Model EA Series replacement filters as manufactured by Flanders Precisionaire.
1.2 Filters shall be UL 900 Class 2 listed.

2.0 Filter Construction
2.1 Filters with an efficiency of 25%-30% shall be constructed of a non-woven cotton and synthetic blend bonded to 1/16 in. thick moisture-resistant fiberboard panels.

2.2 Filters with an efficiency of 50-55%, 80-85%, and 90-95% shall be constructed of lofted synthetic media with moisture-resistant fiberboard panels.

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

Guide Specifications

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
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. Operating face velocities up to 625 fpm are available for all models. Precision Pak filters in depths up to 22 in. 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 I.

Installation Considerations

Precision Pak bag filters may be installed in Flanders Precisionaire Type 9 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housings, or in similar existing hardware.

Type 9 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: 26 ga. corrosion resistant steel
Header: 11/26” in. wide 26 ga. corrosion resistant steel
Operating Limits: 100% RH & 190° F
Actual Header Face Size: Nominal size less 5/8 in. (e.g., a nominal 24 in. x 24 in. filter header is actually 23-3/8 in. x 23-3/8 in.)

Important Features

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

Flanders Precisionaire - Foremost in Air Filtration

Call Free: 1-800-347-2220
### 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 in. x 24 in. size.

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Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
### 55% Synthetic Media

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Notes:
1. PD represents clean pressure drop in inches w.g. for synthetic media filters. Add 10% for fiberglass media Precision Pak.
2. The recommended final pressure drop for all models is 1.0 in. w.g.
3. Gross media area is approximately 7% more than the net area listed.
4. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
Application Guidelines
Precision Pak filters should be selected using 24 in. x 12 in. face sizes. This allows for 12 in. increments in height and width of the filter bank and insures that replacement filters will be readily available. Precision Pak filters should be installed with pockets vertical wherever possible. It is acceptable to install 24 in. x 12 in. 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 Precisionaire 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 “S” or “H” to the model number.

Prefilters
Properly selected bag filters without prefilters will generally require changeout 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 Precisionaire.
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. Stitchings shall be sealed with thermoplastic sealant. Edges shall be finished with overlock stitch to prevent air unravelling.
2.4 Pockets shall be 100% stake-through crimped to prevent media pull-out
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 test methods.
3.4 The manufacturer shall guarantee performance as stated in its literature within tolerances as outlined is Section 7.4 of ARI Standard 850.
Important Features

- INTREPID™ by Kimberly-Clark
- 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: 75%, 85% and 95%

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 75%, 85% and 95% per ASHRAE Standard 52.1 test methods. Operating face velocities up to 625 fpm are available for all models. Precision Pak XDH filters in depths of 12 in. and 22 in. are suited for variable air volume systems. Filters with greater depth are not recommended. Precision Pak XDH filters are UL 900 Class 2 listed.

Kimberly-Clark Media

Precision Pak XDH bag filters use Kimberly-Clark brand 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) capability. 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 110% 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: Kimberly-Clark INTREPID™
Media Backer: Non-woven polyester
Pleat Sealant: Thermoplastic resin
Pleat Retainer: 26 ga. galvanized steel
Header: 7/8 in. wide 26 ga. galvanized steel
Operating Limits: 100% RH & 190° F
Actual Header Face Size: Nominal size less 5/8 in. (e.g., a nominal 24 in. x 24 in. filter header is actually 23-3/8 in. x 23-3/8 in.)
### 85% XDH Synthetic Media Filters

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<th>Number of Pockets</th>
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### 95% XDH Synthetic Media Filters

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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 length possible with a pressure drop that is acceptable.
- Select the most economical filter based on the number of pockets per 24 in. x 24 in. size.
Installation Considerations

Precision Pak bag filters may be installed in Flanders Precisionaire Type 9 Holding Frames, K-Trac Filter Framing Modules, Sureseal Side Access Housing or in similar existing hardware.

Type 9 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.

Performance Data

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</table>

1. PD represents clean pressure drop in inches w.g.
2. The recommended final pressure drop for all models is 1.0 in. w.g.
3. Filters in all standard depths may be operated down to zero air flow on VAV systems.
4. Gross media area is approximately 7% more than the net media area listed.
5. Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

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Call Free: 1-800-347-2220
Application Guidelines

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

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

VAV Systems

VAV systems can be designed using the full range depth of Precision Pak XDH filters. Filter banks should be sized so that the maximum rated flow at design conditions falls within the published recommended velocities. Precision Pak XDH filters in all standard depths can be applied at any capacity between zero flow and catalog-rated capacities.

Gasketed Headers

Precision Pak XDH filters installed in Flanders Precisionaire 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 XDH filters with gasketed headers, add suffix “S” or “H” to the model number. Use “S” gaskets on the sides parallel to the pockets and “H” for gaskets on sides perpendicular to the pockets.

Prefilters

Properly selected bag filters without prefilters will generally require changeout annually in typical HVAC applications. Because of the frequent maintenance expense and increase in fan kW input using prefilters, they are seldom recommended on lower efficiency final filters. However, prefilters are often used on 85% and 95% efficiency applications.

Guide Specifications

1.0 General
1.1 Medium and high efficiency self-supporting filters shall be Precision Pak XDH extended surface type as manufactured by Flanders Precisionaire.
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 polyolefin microfine 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 resin. Edges shall be finished with a four-thread overlock stitch to prevent air bypass.
2.4 Pockets shall be bonded to galvanized steel casings and assembled into a galvanized steel header with reverse-hemmed edges for safety.
2.5 Headers shall be gasketed with polyfoam on vertical sides to prevent leakage when installed in framing modules or Side Access Housings.
2.6 Filters shall be UL 900 Class 2 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 test methods.
3.4 The manufacturer shall guarantee performance as stated in its literature within tolerances as outlined is Section 7.4 of ARI Standard 850.
General

Flanders Precisionaire 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 Precisionaire Type 9 Holding Frames or in Flanders Precisionaire 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.

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**Performance Data**

**Capacities and Dimensions**

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<tr>
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<th>For Side Access Housings (Note 2)</th>
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**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.

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**Guide Specifications**

**1.0 General**

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

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**

4.1 The 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.

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Flanders Precisionaire - Foremost in Air Filtration

Call Free: 1-800-347-2220
**General**

Flanders Precisionaire 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**


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

---

**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
# Standard KKM with Steel Frame

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## Guide Specifications

### 1.0 General
1.1 Washable air filters shall be KKM Air Filters as supplied by Flanders Precisionaire.

### 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.
Passive Electrostatic

The NaturalAire Electrostatic is a passive electrostatic air filter. It uses a special combination of media to electrostatically charge airborne particles and pull them from the airstream. But it does not rely on external power supply to create that attraction. Instead, the friction of air passing over the special synthetic filter components causes the electrostatic attraction to occur naturally.

Because no external power supply is needed, the NaturalAire Electrostatic is a fast, easy and economical upgrade from ordinary spun glass filters. It is available in all of the most common face sizes, 1” depth and 2” depth, as well as almost any “special” size.

Use it for years.

Wash this unique filter out just once a month, let it dry and re-install. You can use it over and over again. It has a 5 year limited warranty.

Key Features

• Passive Electrostatic
• Needs no external power
• Wash and re-use
• 5 year limited warranty
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 accordion 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.

Key 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 | Substance          | Molecular Weight | Approx Activity | Substance      | Molecular Weight | Approx Activity |
|-------------------|------------------|-----------------|-------------------|------------------|-----------------|----------------|-----------------|-----------------|----------------|
| Methane Series    |                  |                 | Methane           | 167.04           | 1               | Cresol         | 108.13          | 4               | 119.39          | 4               |
| Ethane            | 30.07            | 1               | Methanol          | 156.26           | 4               | Chloroform     | 153.84          | 4               | 159.83          | 4               |
| Propane           | 44.09            | 2               | Formaldehyde      | 44.05            | 2               | Valeric Acid   | 20.13           | 4               | 253.84          | 4               |
| Butane            | 58.12            | 2               | Acetaldehyde      | 58.09            | 3               | Butyraldehyde  | 72.10           | 4               | 80.92           | 2               |
| Pentane           | 72.15            | 3               | Propionaldehyde   | 56.06            | 3               | Valericaldehyde| 86.13           | 4               | 127.93          | 2               |
| Hexane            | 86.17            | 3               | Acryladehyde      | 72.10            | 4               | Ethyl Acetate  | 88.10           | 3               | 80.92           | 2               |
| Heptane           | 86.17            | 3               | Butyraldehyde     | 72.10            | 4               | Ethyl Acetate  | 88.10           | 3               | 80.92           | 2               |
| Heptane           | 100.20           | 4               | Valericadehyde    | 102.13           | 4               | Ethyl Acetate  | 88.10           | 3               | 80.92           | 2               |
| Octane            | 114.23           | 4               | Formic Acid       | 46.03            | 2               | Valericadehyde | 102.13          | 4               | 80.92           | 2               |
| Nonane            | 128.25           | 4               | Acetic Acid       | 60.05            | 4               | Butyraldehyde  | 98.13           | 4               | 80.92           | 2               |
| Decane            | 142.28           | 4               | Proponic Acid     | 74.08            | 4               | Chlorine       | 70.91           | 2               | 70.91           | 2               |
| Methane Series    |                  |                 | Butyric Acid      | 88.10            | 4               | Bromine        | 159.83          | 4               | 159.83          | 4               |
| Ethylene Series   |                  |                 | Valeric Acid      | 102.13           | 4               | Iodine         | 20.13           | 1               | 253.84          | 4               |
| Acetylene Series  | 26.04            | 1               | Acrylic Acid      | 76.06            | 4               | Hydrogen Fluoride| 20.13          | 1               | 253.84          | 4               |
| Propyne           | 40.06            | 2               | Caprylic Acid     | 144.21           | 4               | Hydrogen Chloride| 36.47          | 2               | 253.84          | 4               |
| Butyne            | 54.09            | 2               | Pamilic Acid      | 256.42           | 4               | Hydrogen Bromide| 80.92           | 2               | 253.84          | 4               |
| Pentyne           | 68.11            | 3               | Methyl Acetate    | 74.08            | 3               | Hydrogen Iodide| 127.93          | 2               | 253.84          | 4               |
| Hexyne            | 82.14            | 4               | Ethyl Acetate     | 88.10            | 3               | Nitrogen Dioxide| 46.01           | 2               | 253.84          | 4               |
| Heptylene         | 98.18            | 4               | Propyl Ketone     | 114.18           | 4               | Adhesives       | 4               |                 |                 |                 |
| Octalene          | 112.21           | 4               | Methyl Ether      | 46.07            | 3               | Asphalt Fumes  | 4               |                 |                 |                 |
| Benzene Series    |                  |                 | Ethyl Ether       | 74.12            | 3               | Auto Exhaust   | 3               |                 |                 |                 |
| Ethylene          | 28.05            | 1               | Propyl Ether      | 102.17           | 3               | Bathroom Smells| 4               |                 |                 |                 |
| Propylene         | 42.08            | 2               | Butyl Ether       | 130.18           | 4               | Cleaning Compounds| 4            |                 |                 |                 |
| Butylene          | 56.10            | 2               | Amyl Acetate      | 130.18           | 4               | Cooking Odors  | 4               |                 |                 |                 |
| Pentylene         | 70.13            | 3               | Acetone           | 58.08            | 3               | Hospital Odors | 4               |                 |                 |                 |
| Hexylene          | 84.16            | 3               | M.E.K.            | 72.10            | 4               | Kitchen Odors  | 4               |                 |                 |                 |
| Heptylene         | 98.18            | 4               | Diethyl Ketone    | 86.13            | 4               | Mold           | 3               |                 |                 |                 |
| Octalene          | 112.21           | 4               | Methyl Acrylate   | 86.09            | 4               | Ozone          | 4               |                 |                 |                 |
| Benzene Series    |                  |                 | Ethyl Acrylate    | 100.11           | 4               | Paint & Redecorating O|ds | 4            |                 |                 |
| Toluene           | 92.13            | 4               | Methyl Mercaptan  | 48.10            | 4               | Smog           | 4               |                 |                 |                 |
| Xylene            | 106.16           | 4               | Ethyl Mercaptan   | 63.13            | 4               | Stale Odors    | 4               |                 |                 |                 |
| Other substances  |                  |                 | Propyl Mercaptan  | 76.15            | 4               |                 |                 |                 |                 |                 |
| Isoprene          | 68.11            | 3               | Propyl Mercaptan  | 76.15            | 4               |                 |                 |                 |                 |                 |
| Turpentine        | 136.23           | 4               | Eucalyptol        | 154.25           | 4               |                 |                 |                 |                 |                 |
| Naphthalene       | 128.16           | 4               | Camphor           | 155.23           | 4               |                 |                 |                 |                 |                 |
| Phenol            | 94.11            | 4               | Methyl Chloride   | 50.49            | 3               |                 |                 |                 |                 |                 |
| Methyl Alcohol    | 32.04            | 3               | Ethyl Chloride    | 64.52            | 4               |                 |                 |                 |                 |                 |
| Ethyl Alcohol     | 46.07            | 4               | Butyl Chloride    | 78.54            | 4               |                 |                 |                 |                 |                 |
| Propyl Alcohol    | 60.09            | 4               | Butyl Chloride    | 92.57            | 4               |                 |                 |                 |                 |                 |
| Butyl Alcohol     | 74.12            | 4               | Methylene Chloride| 84.94            | 4               |                 |                 |                 |                 |                 |
| Amyl Alcohol      | 88.15            | 4               | Ethyl Chloride    | 78.54            | 4               |                 |                 |                 |                 |                 |

**Activity Levels:**

- **4**: High adsorptive capacity with the substance listed. Activity of activated carbon typically will run 20% or more of the activated carbon's weight.
- **3**: Satisfactory adsorptive capacity with substance listed. Activity of activated carbon typically will run 10% or more of the activated carbon's weight.
- **2**: Borderline adsorptive capacity with substance listed. Activity of activated carbon typically will run 5% or more of the activated carbon's weight.
- **1**: Low adsorptive capacity with substance listed. Activity of activated carbon will typically run less than 5% of the activated carbon's weight.
FCP Series - Activated Carbon Filled Nonwoven Media Adsorbers

Flanders Precisionaire’ 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 of 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 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 in. and 4 in. depths.

200 Series - Standard Capacity

The filter media has a carbon mass loading of 7 oz. per sq. yd. of material.

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.

- 201 or 301 - Removal of VOC’s
- 202 or 302 - Removal of Acid Gases
- 204 or 304 - Removal of Alkaline Gases

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

<table>
<thead>
<tr>
<th>Product</th>
<th>Capacity to 75% Breakthrough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Slurry</td>
<td>1.6 grams</td>
</tr>
<tr>
<td>FCP 200 Series</td>
<td>25 grams</td>
</tr>
<tr>
<td>FCP 300 Series</td>
<td>63 grams</td>
</tr>
</tbody>
</table>
### Guide Specifications

**1.0 General**

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

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

---

**FCP Selection**

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

Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.
Improves IAQ through odor abatement and better particulate air filtration

Many strong odors in living spaces come from materials that are either strong acids or strong bases. For example, sauerkraut smells up the house because it is highly acidic. And the “ammonia” smell of urine is highly alkaline...a strong base. The Flanders Precisionaire PH Odor Control Pleat is specifically designed to bring both types of odor molecules...acid or base...into a more neutral, PH balanced, odor free state.

The secret of this filter’s odor effectiveness is sodium bicarbonate. It is basically an industrial version of the baking soda you put in the fridge to remove odors. The media fibers of the PH Odor Control Pleat are coated with this material.

And it is sodium bicarbonate’s natural ability to neutralize both acids and bases...balance their PH...that makes the PH Odor Control filter effective as a wide spectrum odor neutralizer.

Bonus...better particulate filtration

Fractional efficiency tests on the sodium bicarbonate treated filter medium showed it to perform better on particulates as well as on acid and alkaline odors. Treatment caused no change in pressure drop.

Examples of applications that might benefit from such a filter include family residences, hotel rooms, nursing facilities, athletic clubs and other areas with odors that come from strong acids or strong bases.

Construction

Cotton and polyester pleat media is prepared by immersion in a special sodium bicarbonate slurry, then dried. Media is adhered to galvanized expanded metal and deep pleated. Pleated pack is encased and sealed within a moisture resistant kraft board frame. This filter is offered in 1”, 2” and 4” depths in all of the most popular face sizes, plus special sizes.

Key Features

- Removes both acid and base type odors
- Works by reaching PH balance
- Tested technology
- With sodium bicarbonate (baking soda)
- Odor removal PLUS better particulate filtration
- Works on pet odor, cooking odor, body odor & more
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
1.0 General
1.1 Disposable carbon air filters shall be Model C as manufactured by Flanders Precisionaire.

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.

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:
   - C50-1 in., 0.30 w.g.
   - C50-2 in., 0.25 w.g.
   - C75-1 in., 0.35 w.g.
   - C75-2 in., 0.30 w.g.

Guide Specifications

<table>
<thead>
<tr>
<th>Actual Depth (in.)</th>
<th>Actual HxW (in.)</th>
<th>Nominal cfm at 300 fpm</th>
<th>Carbon weight (lbs.) per filter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>C50</td>
</tr>
<tr>
<td>3/4</td>
<td>11-1/2 x 23-1/2</td>
<td>600</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>15-1/2 x 19-1/2</td>
<td>660</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td>15-1/2 x 24-1/2</td>
<td>830</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>19-1/2 x 19-1/2</td>
<td>830</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>19-1/2 x 24-1/2</td>
<td>1040</td>
<td>3.25</td>
</tr>
<tr>
<td></td>
<td>23-1/2 x 23-1/2</td>
<td>1200</td>
<td>4.00</td>
</tr>
</tbody>
</table>

| 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                |
General

Flanders Precisionaire 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 filter is approximately 99% efficient by the ASHRAE 52.1 dust spot test methods. However, it is not rated by these methods because the standard applies to filters no greater than 98% efficient.

Alpha 95 Filters are 97% efficient on nebulized staphylococcus aerosols and are used to remove biological contaminants. 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 Precisionaire 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 Precisionaire 80-85% ASHRAE efficiency prefilters 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 Filters 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 seal or gel seal.
**ALPHA 95 and ALPHA CELL COMPONENT CHART**

<table>
<thead>
<tr>
<th>HARDWARE</th>
<th>0 = None</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFFICIENCY</td>
<td></td>
</tr>
<tr>
<td>00J = 95% DOP Cell (NOT a HEPA)</td>
<td></td>
</tr>
<tr>
<td>007 - 99.97% DOP HEPA</td>
<td></td>
</tr>
<tr>
<td>PACK STYLE</td>
<td></td>
</tr>
<tr>
<td>C = WITH ALUMINUM SEPARATORS</td>
<td></td>
</tr>
<tr>
<td>FRAME MATERIAL</td>
<td></td>
</tr>
<tr>
<td>08 = 16 GA. GALVANEAL</td>
<td></td>
</tr>
<tr>
<td>11 = 3/4 in. NON FIRE RETARDANT PARTICLE BOARD</td>
<td></td>
</tr>
<tr>
<td>FRAME STYLE</td>
<td></td>
</tr>
<tr>
<td>00 = BOx</td>
<td></td>
</tr>
<tr>
<td>03 = DOUBLE-TURNED FLANGE</td>
<td></td>
</tr>
<tr>
<td>SEALANT MATERIAL</td>
<td></td>
</tr>
<tr>
<td>IU = URETHANE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIZE DESIGNATORS HxWxD</th>
</tr>
</thead>
<tbody>
<tr>
<td>C = 12&quot;</td>
</tr>
<tr>
<td>G = 24&quot;</td>
</tr>
<tr>
<td>U = 11-3/8&quot;</td>
</tr>
<tr>
<td>Y = 23-3/8&quot;</td>
</tr>
<tr>
<td>F = 11-1/2&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACE GUARD MATERIAL</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = NONE</td>
<td></td>
</tr>
<tr>
<td>G = ALUMINIZED EXPANDED METAL</td>
<td></td>
</tr>
<tr>
<td>1 = UPSTREAM</td>
<td></td>
</tr>
<tr>
<td>2 = DOWNSTREAM</td>
<td></td>
</tr>
<tr>
<td>3 = BOTH SIDES</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GASKET MATERIAL</th>
<th>GASKET LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = NONE</td>
<td></td>
</tr>
<tr>
<td>1 = NEOPRENE</td>
<td></td>
</tr>
<tr>
<td>2 = UPSTREAM</td>
<td></td>
</tr>
<tr>
<td>3 = DOWNSTREAM</td>
<td></td>
</tr>
<tr>
<td>3 = BOTH SIDES</td>
<td></td>
</tr>
</tbody>
</table>

In the example shown here, **0-00J-C-11-00-IU-12-00-GG-F** indicates:
- Filter with no hardware
- 95% DOP efficiency
- With Aluminum Separators
- 3/4 inch NON fire retardant particle board
- Box Frame
- Urethane Sealant
- Neoprene Gasket on the downstream side
- No faceguards
- Size 24"H x 24"W x 11-1/2"D
General
Flanders Precisionaire offers a complete line of Alpha Cell HEPA Filters in two 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 Filters are Class 2 listed.

Typical applications for Alpha Cell Filters include:
• Hospitals
• Biomedical
• Pharmaceutical
• Biotechnology
• Genetic Research
• Universities
• Laboratories
• Food Processing
• Photo Processing
• Semiconductor Fabrication
• Industrial Processing Systems

Testing
Flanders Precisionaire 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 Precisionaire 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.

Features:
• Galvaneal frame
• UL 900 Class II
• Hemmed edge corrugated aluminum separators
• Water resistant fiberglass media
• Closed cell neoprene gasket
• 99.97% efficiency on .3 microns
### Alpha Cell HEPA Filter Dimensions and Capacities

<table>
<thead>
<tr>
<th>Frame Depth (Inches)</th>
<th>Filter Size &amp; Frame Depth Designator</th>
<th>Actual Face Size (inches)</th>
<th>CFM Capacity at Clean Pressure Drop, inches w.g.</th>
<th>Weight (LB.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>.65</td>
<td>1.0</td>
</tr>
<tr>
<td>11-1/2</td>
<td>CG-F</td>
<td>24x24</td>
<td>650</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td>GC-F</td>
<td>24x12</td>
<td>300</td>
<td>455</td>
</tr>
<tr>
<td>5-7/8&quot;</td>
<td>GG-D</td>
<td>24x24</td>
<td>325</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>GC-D</td>
<td>24x12</td>
<td>145</td>
<td>225</td>
</tr>
</tbody>
</table>

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

---

### Important note:
All HEPA filters are non-returnable and have an average lead time of 3 to 4 weeks.

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### Guide Specifications

#### 1.0 General
1.1 Alpha Cell HEPA filters shall be extended media separator type filters as manufactured by Flanders Precisionaire.
1.2 Filter sizes, capacities and construction shall be as scheduled on the drawings.
1.3 Filters shall be (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.
2.2 The filter pack shall be sealed into a (galvaneal) frame with a fire retardant polyurethane foam sealant.
2.3 A 40-durometer closed-cell neoprene gasket shall be provided on one side 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. 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.
**General**

Flanders Precisionaire Alpha Frames are permanent holding frames for field or OEM assembly of built-up HEPA filter banks. They may be used to hold Alpha 95 filters, Alpha 2000 or Alpha Cell HEPA filters. Standard sizes include the three most popular filter face sizes: 24 in. x 24 in., 24 in. x 12 in. and 12 in. x 24 in. Separate spring-loaded swing-arm assemblies are used to retain either 6 in. or 12 in. nominal depth filter casings. The entire assembly will have the same efficiency as the filters themselves without leaks or bypass when the filters and frames are installed as recommended by Flanders Precisionaire.

**Construction**

Alpha Frames are constructed of all-welded 14 ga. galvanized steel with a 3/4 in. flange for rigidity. Factory-punched holes on each side facilitate positioning of the frames for easy filter bank assembly. The mounting holes on the top and bottom of each frame are surrounded by a formed raised dimple which both recesses the fastener and positions the filter. The contact surface for the filter gasket is smoothed and finished for a leak-tight seal.

Four cadmium-plated spring-loaded swing-arm assemblies are furnished with each frame. Spring-loading helps correct for gasket set over the life of the filter and maintains a leak-tight seal. The swing-arm assemblies are set into filter-aligning retainers attached to the inner vertical sides of the frame.

**Installation Considerations**

Alpha Frames may be installed for either upstream (dirty side) or downstream (clean side) service. Filter installation and removal is greatly facilitated if at least 36 in. of service clearance upstream of the filter face is provided. The clearance space can be shared with downstream serviced ASHRAE-rated prefilters.

Installation recommendations are found on the Flanders Precisionaire Alpha Frame drawing. The dimensional drawings on this data sheet may be used for general layout purposes.

**Optional Prefilter Frame Assembly**

Flanders Precisionaire offers a prefilter frame assembly to hold standard face size nominal 2, 4, and 6 in. deep panel or rigid filters. The 16 ga. galvanized steel frames with a gasket on the prefilter-sealing surface attaches directly to specially designed spring-loaded swing-arm assemblies. The frame allows the prefilter to be serviced without disturbing the HEPA filter. Add suffix -PFA to the Alpha Frame model number to specify a prefilter frame.

**Important Features**

- 14 ga. galvanized steel frame for corrosion resistance and rigidity
- Four spring-loaded swing-arm assemblies compress filter gasket for leak-tight seal
- Flat smooth-finished gasket sealing surface is backed by a rigid standing flange
- Pre-punched holes facilitate field assembly of built-up filter banks
- Swing-arm retainers position filter properly in frame
- Optional prefilter frame assembly available for direct attachment to swing-arm
### Physical Data

Frame: All-welded 14 ga. galvanized steel
Filter Gasket Seat: Flat contact surface, ground and smooth-finished, backed by a standing flange for rigidity
Sealing Method: Spring-loaded swing-arm assemblies, four per frame
Provisions for Joining Frames: Minimum of four factory-punched holes per side

<table>
<thead>
<tr>
<th>Nominal Prefilter Thickness (Inches)</th>
<th>Dim. G (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>1.5</td>
</tr>
<tr>
<td>12</td>
<td>7.5</td>
</tr>
</tbody>
</table>

### Alpha Frame Usage, Dimensions and Weights

<table>
<thead>
<tr>
<th>Model Number Note 1</th>
<th>Alpha Frame Size H x W (inches)</th>
<th>Actual Size Alpha Cell Filter Required HxWxD (inches) Note 2</th>
<th>Overall Depth with Filter Dim “E” (in.)</th>
<th>Overall Depth with Prefilter Assembly Dim “F” (in.)</th>
<th>Weight per Frame (lbs.) Note 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF-242412</td>
<td>24-1/2 x 26</td>
<td>24 x 24 x 11-1/2</td>
<td>12-1/2</td>
<td>15-1/4</td>
<td>35</td>
</tr>
<tr>
<td>AF-241212</td>
<td>24-1/2 x 14</td>
<td>24 x 12 x 11-1/2</td>
<td>12-1/2</td>
<td>15-1/4</td>
<td>27</td>
</tr>
<tr>
<td>AF-122412</td>
<td>12-1/2 x 26</td>
<td>12 x 24 x 11-1/2</td>
<td>6-3/4</td>
<td>9-1/2</td>
<td>25</td>
</tr>
<tr>
<td>AF-24246</td>
<td>24-1/2 x 26</td>
<td>24 x 24 x 5-7/8</td>
<td>6-3/4</td>
<td>9-1/2</td>
<td>33</td>
</tr>
<tr>
<td>AF-24126</td>
<td>24-1/2 x 14</td>
<td>24 x 12 x 5-7/8</td>
<td>6-3/4</td>
<td>9-1/2</td>
<td>25</td>
</tr>
<tr>
<td>AF-12246</td>
<td>12-1/2 x 26</td>
<td>12 x 24 x 5-7/8</td>
<td>6-3/4</td>
<td>9-1/2</td>
<td>25</td>
</tr>
</tbody>
</table>

### Notes:
1. Add suffix -PFA to the Alpha Frame model number if the optional prefilter frame assembly is specified.
2. Alpha Cell filters must be specified separately. Specify gaskets on both the upstream and downstream sides (suffix B) when using the prefilter frame assembly.
3. Prefilters and fasteners must be specified separately for the prefilter frame assembly.
4. Add 8 lbs. each for the prefilter frame assembly less prefilters.

### Guide Specifications

**1.0 General**

1.1 Permanent holding frames for HEPA filters shall be Alpha Frames as manufactured by Flanders.

**2.0 Filter Construction**

2.1 Frames shall be constructed of 14 ga. galvanized steel with pre-punched fastener holes for easy field assembly.
2.2 Frame depth shall be 5 in. in addition to 3/4 in. standing flange downstream of the sealing surface for rigidity.

2.3 Filter gasket contact surface shall be flat and smooth-finished.

2.4 Four spring-loaded swing-arm assemblies shall maintain compression on the filter and gasket for a leak-tight seal throughout the life of the filter.

**3.0 Installation**

3.1 Install frames in accordance with the manufacturer’s written recommendations.

3.2 Furnish Model PFA prefilter frame assemblies if specified.
General

Flanders Precisionaire Alpha B-1 Frames are permanent holding frames for field or OEM assembly of built-up HEPA/ULPA filter banks. They may be used to hold Alpha 95, Alpha Cell and Alpha 2000 filters with gasketed frames. Standard sizes include the three widely-used filter face sizes: 24 in. x 24 in., 24 in. x 12 in. and 12 in. x 24 in., as well as less common sizes: 24 in. x 30 in. and undersize versions of the common face sizes. Separate locking arm and screw assemblies are used to retain the nominal 12 in. depth filter casings. The entire assembly will have the same efficiency as the filters themselves without leaks or bypass when the filters and frames are installed as recommended by Flanders Precisionaire. Clips to hold prefilters are available.

Construction

Alpha B-1 Frames are constructed of all-welded 14 gauge galvanneal steel. Factory-drilled alignment holes on each side facilitate positioning of the frames for easy filter bank assembly. Welded to the inside of the frame on the bottom and both sides are alignment bars. These bars position the filter properly so that its gasket will mate with the sealing flange around the periphery of the filter frame.

Four stainless steel removable locking arm and screw assemblies are furnished with each frame, and they are easily adjusted to hold the filter in place and press its gasket onto the flange of the frame.

Installation Considerations

Alpha B1 Frames may be installed for service from the air entering (upstream) side or the air leaving (downstream) side. Filter installation and removal are greatly facilitated if at least 36 inches of service clearance is provided. If the HEPA/ULPA filter bank is arranged for air entering side service, this clearance space may be shared with downstream-serviced ASHRAE-rated prefilters. Optional prefilter clips may be placed on the frame's sealing flange. Prefilters held by these clips must be serviced from the side opposite that used for HEPA/ULPA service.

Optional Construction

- Type 304 stainless steel
- Aluminum, 0.08 in. thick
- Custom sizes
- Frames for nominal 6 inch deep filters

Important Features

- All-welded 14 gauge galvanneal steel construction for corrosion resistance and rigidity
- Stainless steel locking arm and screw assemblies secure and seal the HEPA filter
- Factory-drilled alignment holes facilitate field assembly of built-up filter banks.
- Optional prefilter assembly is available for direct attachment to the frame
### Guide Specifications

**1.0 General**

1.1 Permanent holding frames for HEPA/ULPA filters shall be Alpha B-1 models as manufactured by Flanders.

**2.0 Frame Construction**

2.1 Frames shall be constructed of 14 gauge galvanneal steel, 304 stainless steel, or .080 in. aluminum with factory-drilled alignment holes on each side to facilitate field erection of the filter bank.

2.2 Depth of frame shall be 8 inches. Furnish alignment bars on bottom and two sides of the interior of the frame, and a sealing surface to mate with the gasket on the filter.

2.3 Furnish four stainless steel locking arm and screw assemblies, one for each corner, to support the filter and to compress its gasket properly against the sealing flange for a leakfree installation.

**3.0 Installation**

3.1 Install frames in accordance with Flanders’s written recommendations.

---

*B* Insert material of construction: GLV for galvanneal steel, 304 for type 304 stainless steel, ALUM for aluminum.

Note: for 5-7/8 in. deep filter, substitute “D” as a suffix in lieu of “F”
General
Flanders Precisionaire Type 9 Holding Frames are used to construct built-up filter banks for upstream or downstream access using ASHRAE rated filters. Type 9 frames will accommodate 1 in., 2 in. or 4 in. panel filters including metal washable filters. They are also suitable for bag filters, self-supporting rigid filters and disposable type carbon elements. A filter-to-frame seal is effected by a factory-installed gasket and positive-sealing fasteners.

Options
The standard frame is nominal 3 in. deep and constructed of 16 ga. galvanized steel. Type 304 stainless steel is an available option. Frames are also available in nominal 2 in., 4 in., and 6 in. depth. Actual depth is 1/8 in. under nominal size.

Installation Consideration
Type 9 Frames can be assembled with pop rivets or nuts and bolts. Prior to assembly, all sides should be caulked with a non-hardening compound to prevent air bypass. Filter banks three frames high or higher should be strengthened with 3 in. wide 16 ga. stiffeners between each vertical row.

Guide Specifications
1.0 Filter holding frames shall be Type 9 as manufactured by Flanders Precisionaire.
1.1 Frames shall be manufactured of 16 ga. galvanized steel and furnished with factory-installed gasketing.
1.2 In-line depth shall be 3 in. in order to effect a rigid and secure filter bank assembly. Filter fasteners shall be selected to meet the requirements of the specified filters. Fasteners shall not require the use of tools to secure the filters.

Fasteners
Flanders Precisionaire offers several types of fasteners for use with Type 9 Frames. Refer to the Fastener Selection Chart on the reverse side of this sheet to select the appropriate fastener.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Dimensions, Inches</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>W</td>
<td>D</td>
</tr>
<tr>
<td>9HF-12243R</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>9HF-16203R</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>9HF-16253R</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>9HF-20203R</td>
<td>20</td>
<td>20</td>
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<tr>
<td>9HF-20243R</td>
<td>20</td>
<td>24</td>
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<tr>
<td>9HF-20253R</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>9HF-24243R</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

Note: 1. Tolerances are +0 in. and -1/16 in.
2. Special sizes are available upon request
## Fastener Selection Chart

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Length (in.)</th>
<th>Filter Usage</th>
<th>Number Per Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1</td>
<td>1</td>
<td>1 in. panel filter, Precision Pak, PrecisionCell, or Rigid-Air</td>
<td>2 Upstream, 4 Downstream</td>
</tr>
<tr>
<td>P-2</td>
<td>2</td>
<td>2 in. panel filter</td>
<td>2 Upstream, 4 Downstream</td>
</tr>
<tr>
<td>P-3</td>
<td>3</td>
<td>2 in. panel prefilter with Precision Pak, PrecisionCell, or Rigid-Air</td>
<td>2 Upstream, Not Recommended Downstream</td>
</tr>
<tr>
<td>P-4</td>
<td>4</td>
<td>4 in. panel filter, PrecisionCell II</td>
<td>2 Upstream, 4 Downstream</td>
</tr>
<tr>
<td>P-5</td>
<td>5</td>
<td>4 in. panel prefilter with Precision Pak bag, PrecisionCell, or Rigid-Air</td>
<td>2 Upstream, Not Recommended Downstream</td>
</tr>
<tr>
<td>P-6</td>
<td>6</td>
<td>6 in. PrecisionCell or Rigid-Air</td>
<td>2 Upstream, 4 Downstream</td>
</tr>
<tr>
<td>P-12</td>
<td>12</td>
<td>12 in. PrecisionCell, or Rigid-Air</td>
<td>2 Upstream, 4 Downstream</td>
</tr>
<tr>
<td>C-2</td>
<td>2</td>
<td>2 in. panel prefilter with PrecisionCell or Rigid-Air</td>
<td>4 Not Used</td>
</tr>
<tr>
<td>C-4</td>
<td>4</td>
<td>4 in. panel prefilter with PrecisionCell or Rigid-Air</td>
<td>4 Not Used</td>
</tr>
<tr>
<td>C-12</td>
<td>12</td>
<td>12 in. PrecisionCell or Rigid-Air</td>
<td>2 Not Used</td>
</tr>
</tbody>
</table>

---

**Model P Fastener**

**Model C-2 and C-4 Fastener**

**Model C-12 Spring Loaded Fastener**

---

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
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.

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

<table>
<thead>
<tr>
<th>Standard Sizes</th>
<th>Nominal Size</th>
<th>Actual Size</th>
<th>(inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 x 24 x 1</td>
<td>23-1/2 x 23-1/2 x 7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 x 25 x 1</td>
<td>19-1/2 x 24-1/2 x 7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 x 20 x 1</td>
<td>19-1/2 x 19-1/2 x 7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 x 25 x 1</td>
<td>15-1/2 x 24-1/2 x 7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 x 20 x 1</td>
<td>15-1/2 x 19-1/2 x 7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 x 24 x 2</td>
<td>23-1/2 x 23-1/2 x 1-7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 x 25 x 2</td>
<td>19-1/2 x 24-1/2 x 1-7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 x 20 x 2</td>
<td>19-1/2 x 19-1/2 x 1-7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 x 25 x 2</td>
<td>15-1/2 x 24-1/2 x 1-7/8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 x 20 x 2</td>
<td>15-1/2 x 19-1/2 x 1-7/8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Important Features

- 26 ga. corrosion resistant steel construction
- Metal lathe support backing
- Mitered corners to ensure squareness and eliminate snagging of media

Guide Specifications

1.0 General

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

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.
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
<table>
<thead>
<tr>
<th>Height Code</th>
<th>Overall Height (in)</th>
<th>Face Velocity Overall Height (in)</th>
<th>Width Code</th>
<th>Overall Width (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10H 24-1/2</td>
<td>10H 24-1/2</td>
<td>10H 24-1/2</td>
<td>10H 24-1/2</td>
<td>10H 24-1/2</td>
</tr>
<tr>
<td>15H 36-1/16</td>
<td>15H 36-1/16</td>
<td>15H 36-1/16</td>
<td>15H 36-1/16</td>
<td>15H 36-1/16</td>
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<tr>
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<td>20H 48-13/16</td>
<td>20H 48-13/16</td>
<td>20H 48-13/16</td>
<td>20H 48-13/16</td>
</tr>
<tr>
<td>30H 73-1/8</td>
<td>30H 73-1/8</td>
<td>30H 73-1/8</td>
<td>30H 73-1/8</td>
<td>30H 73-1/8</td>
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<tr>
<td>35H 85-9/16</td>
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<tr>
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<td>40H 97-7/16</td>
<td>40H 97-7/16</td>
<td>40H 97-7/16</td>
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<tr>
<td>50H 121-3/4</td>
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<td>50H 121-3/4</td>
<td>50H 121-3/4</td>
<td>50H 121-3/4</td>
</tr>
<tr>
<td>60H 146-1/16</td>
<td>60H 146-1/16</td>
<td>60H 146-1/16</td>
<td>60H 146-1/16</td>
<td>60H 146-1/16</td>
</tr>
</tbody>
</table>

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-headed 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:

- 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

Filter Usage and Module Weight

<table>
<thead>
<tr>
<th>Height Code</th>
<th>Filters Weight (lbs.)</th>
<th>Width Code</th>
<th>15W</th>
<th>20W</th>
<th>25W</th>
<th>30W</th>
<th>35W</th>
<th>40W</th>
<th>45W</th>
<th>50W</th>
<th>55W</th>
<th>60W</th>
<th>65W</th>
<th>70W</th>
</tr>
</thead>
<tbody>
<tr>
<td>10H</td>
<td>Filters Weight 1A-1C</td>
<td>10 2 2A-1C 15 3A-1C 19 4A 22 4A-1C 24 5A 26 5A-1C 28 6A 31 6A-1C 33 7A 35</td>
<td></td>
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</tr>
<tr>
<td>15H</td>
<td>Filters Weight 1A-2C 18 2A-2C 22 2A-3C 26 3A-3C 30 3A-4C 34 4A-4C 38 4A-5C 42 5A-5C 46 5A-6C 50 6A-6C 54 6A-7C 58 7A-7C 62</td>
<td></td>
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</tr>
<tr>
<td>25H</td>
<td>Filters Weight 2A-3C 26 4A-2C 32 4A-4C 38 6A-3C 44 6A-5C 49 8A-4C 55 8A-6C 61 10A-5C 67 10A-7C 72 12A-6C 78 12A-8C 84 14A-7C 90</td>
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<td></td>
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</tr>
<tr>
<td>30H</td>
<td>Filters Weight 3A-3C 28 6A 34 6A-3C 39 9A 45 9A-3C 51 12A 57 12A-3C 62 15A 68 15A-3C 74 18A 79 18A-3C 85 21A 91</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>40H</td>
<td>Filters Weight 4A-4C 37 8A 44 8A-4C 52 12A-4C 66 16A 74 16A-4C 81 20A 89 20A-4C 96 24A 104 24A-4C 111 28A 119</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60H</td>
<td>Filters Weight 6A-6C 54 12A 65 12A-6C 76 18A 87 18A-6C 98 24A 109 24A-6C 120 30A 131 30A-6C 142 36A 153 36A-6C 164 42A 175</td>
<td></td>
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</tr>
</tbody>
</table>

* 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 Precisionaire.

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.
Media for high efficiency air cleaners

For over 50 years, Flanders Precisionaire air filters have been protecting cleanrooms, hospital operating rooms and other critical environments. Now, homes and businesses can benefit from their superior craftsmanship in a new line of Flanders Precisionaire filters.

Construction

Models 500AB, 600SG and replacement cartridges for selected Honeywell® 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 and offers a MERV 8 rating.

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.

Installation

Air Bear® replacements

Models 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® replacements

The Model 650 insert installs in Space Gard® models 2200 and 2250 air cleaner housings by using the existing pleat separators and media holding assembly. 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® 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® replacements

The Honeywell® replacement cartridges are designed for use in Honeywell models 203719, 203720, 203721 and 203722. They offer the benefit of superior performance and easy installation.
<table>
<thead>
<tr>
<th>Replacement for:</th>
<th>FP Refill(s)</th>
<th>MERV</th>
<th>Media</th>
<th>Frame</th>
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<td>Electrostatic Poly Blend</td>
<td>Water resistant kraft board</td>
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<tr>
<td></td>
<td>550AB Cartridge</td>
<td>10</td>
<td>Wet laid glass microfiber-mini pleat</td>
<td>Water resistant kraft board</td>
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<td>Research Products Corporation Space Gard®</td>
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<td>8</td>
<td>Electrostatic Poly Blend</td>
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<td>550AB Cartridge</td>
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<td>Wet laid glass microfiber-mini pleat</td>
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<td>See FP Model</td>
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</table>

### Performance Data - Wet Laid Glass Media

<table>
<thead>
<tr>
<th>Initial Resistance @ 300 fpm</th>
<th>Cartridge .18 in. w.g.</th>
<th>Efficiency by Particle Size</th>
<th>Efficiency</th>
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<tbody>
<tr>
<td>Microns</td>
<td>.3</td>
<td>30%</td>
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<tr>
<td></td>
<td>.5</td>
<td>62%</td>
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<td></td>
<td>.7</td>
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<td>1</td>
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</tr>
<tr>
<td></td>
<td>2</td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>94%</td>
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</tr>
<tr>
<td></td>
<td>5</td>
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</tr>
<tr>
<td></td>
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### Performance Data - Poly Blend Media

<table>
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<th>Efficiency by Particle Size</th>
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</thead>
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<td>Microns</td>
<td>Efficiency</td>
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<td>.35</td>
<td>16%</td>
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<tr>
<td>.62</td>
<td>28%</td>
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<tr>
<td>.84</td>
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<td>1.14</td>
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<td>6.20</td>
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<td>8.37</td>
<td>66%</td>
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</table>

*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.

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

*Products described here are competing products from Flanders Precisionaire®. Reference to competing brands are for system identification only.*
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

- **A** = 7-1/8"
- **B** = 25-1/16"
- **C** = 22-5/16"

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.
Airia 350
Electronic Room Air Cleaner

General
Airia 350 delivers high quality air filtration right into the living space. This compact unit is filled with the latest developments in air filtration, from high efficiency HEPA technology to state-of-the art odor control. It will purify the air in a 25’x25’ room 4 times an hour - quietly and efficiently. All of this in a footprint of under 2 square feet.

Construction
The Airia 350 features four stages of filtration, contained in a tastefully designed cabinet that has a rich, wood grain finish.
1st stage: Spun glass panel
2nd stage: Arm & Hammer Odor Control
3rd stage: TechSorb™ Activated Carbon
4th stage: HEPA type

Important Features
• Super quiet operation
• Operates for pennies a day.
• 4 stage filtration removes particles, odors.
• Moves 350 cubic feet of air every minute.
• Built-in casters for easy moving.
• Easy to service

Physical Data
- Rated capacity: 350 CFM
- Electrical input: 120 VAC, 1Ph, 60 Hz
- Power Consumption: 100 watts
- Weight: 55 lbs.
- Controls: On-off-variable speed, solid state
- Cabinet: Wood, vinyl laminated

Flanders Precisionaire - Foremost in Air Filtration
Call Free: 1-800-347-2220
General

The Airia line of electronic air cleaners delivers high, instantaneous filtering efficiency in a reliable, permanent package that is built to last the life of an air handling system. Airflow resistance is low and constant. Operation costs only pennies per day.

Airia 1400 and 2000 are designed for easy duct-mounted installation with today’s higher efficiency central forced air systems. They feature a powder coated galvanized steel cabinet, permanent all aluminum collector cell, odor control filter and state of the art PWM power supply. These simple, rugged and reliable air cleaners deliver 3 comprehensive stages of air cleaning:

• 1st stage pleated prefilter preconditions the air
• 2nd stage electronic cell collects airborne particles
• 3rd stage Arm & Hammer® post filter removes odors.

Airia whole house air cleaners feature a reliable, built-in airflow sensor to cycle on and off with the central system fan.

The unit is very easy to clean. Just lift off the access door, remove collector cells to tub or sink wash. Let dry and re-install.

Physical Data

Cabinet is one-piece epoxy coated steel
Cells are aluminum and can be removed for washing
Post filter shipped with unit is patented Arm & Hammer odor control filter
Electronics are dependable high-frequency.
Air flow sensor cycles unit on and off with the system fan.
LED operation indicators
On-off switch for convenient servicing.

Important features:

• High efficiency electronic air cleaning
• Durable one-piece steel cabinet, epoxy coated
• Permanent washable aluminum collector cells
• Dependable high frequency electronics, LED indicators, convenient on-off switch for servicing
• High, instantaneous collection efficiency
• Low & constant resistance to airflow
• Operates for pennies per day
• Patented Arm & Hammer odor control filter
• Electronic sensor cycles unit on/off with system fan
• Easy to install
• Easy to clean
### Specifications

<table>
<thead>
<tr>
<th>Dimension</th>
<th>AIRIA 1400 (16x25)</th>
<th>AIRIA 2000 (20x25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Capacity</td>
<td>1400 CFM</td>
<td>2000 CFM</td>
</tr>
<tr>
<td>Electrical Input</td>
<td>120 Vac, 1 Ph, 60 Hz</td>
<td>120 Vac, 1 Ph, 60 Hz</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>40 watts</td>
<td>48 watts</td>
</tr>
<tr>
<td>Resistance to Airflow</td>
<td>0.2” w.g. @ 1400 CFM</td>
<td>0.2” w.g. @ 2000 CFM</td>
</tr>
<tr>
<td>Unit Weight</td>
<td>40 lbs.</td>
<td>45 lbs.</td>
</tr>
<tr>
<td>Prefilter</td>
<td>Disposable pleat</td>
<td>Disposable pleat</td>
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<tr>
<td>Main Collector</td>
<td>2-stage electronic</td>
<td>2-stage electronic</td>
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<tr>
<td>Odor Control</td>
<td>Arm &amp; Hammer® Pleat</td>
<td>Arm &amp; Hammer® Pleat</td>
</tr>
<tr>
<td>Finish</td>
<td>Epoxy Powder Coated</td>
<td>Epoxy Powder Coated</td>
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<tr>
<td>Mounting Options</td>
<td>Vertical or Horizontal</td>
<td>Vertical or Horizontal</td>
</tr>
<tr>
<td>On/Off Operation</td>
<td>Electronic Thermister</td>
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### Technical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>DIM “A” (inches)</th>
<th>DIM “B” (inches)</th>
<th>DIM “C” (inches)</th>
<th>DIM “D” (inches)</th>
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<tr>
<td>AIRIA 1400</td>
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<td>13.762</td>
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<tr>
<td>AIRIA 2000</td>
<td>23.960</td>
<td>20.335</td>
<td>19.762</td>
<td>17.762</td>
</tr>
</tbody>
</table>
**Precisionaire Silicone Rubber Sealant**

Through its unique chemical makeup, this sealant reacts with moisture in the air to form a tough, permanently elastic rubber seal. It is the perfect choice for sealing joints or seams that experience dramatic expansion and contraction from temperature variation. It adheres to almost all surfaces and cures tack-free in less than an hour.

Precisionaire Silicone Rubber Sealant is specially formulated to be safe for food contact. When cured and washed, ingredients which could migrate to food are listed in FDA regulation number 21CFR177.2600. Typically used around chilled food cases, freezers, coolers and ice bins. Also can be used for control joints, glazing and other general construction applications.

**Filter Boost**

A “dust adhesive” for impingement type air filters such as the Flanders Precisionaire Aluminum Kwik Kut and KKM filters. While intended primarily for metal filters, tests have shown that dust adhesive can also dramatically increase the effectiveness of ordinary spun glass filters. Just spray on the filter.

Filter Boost dust adhesive comes in a handy 6 ounce pump bottle and is shipped in its own counter display.

**Aerosol Spray Adhesive**

Handy adhesive in 13 ounce aerosol spray can for a variety of bonding applications. Bonds materials such as fibrous glass, paper, foil, cork, polystyrene foam, plastic sheeting, foam rubber, cardboard felt, etc. to themselves or to metal, glass or wood. Can be used for either permanent or removable bonds.

**Bubble-type Leak Detectors**

Apply bubble type leak detectors to gas-pressurized lines in areas suspected of gaseous leak. If leak is present, bubbles form. Flanders Precisionaire’s **Fluorescent Leak Detector** comes in 8-ounce dauber-top bottles. It has a distinctive yellow-green tint that makes leak spotting easier in either dimly or brightly lit areas. It clings well and is non-freezing down to -5 degrees F.