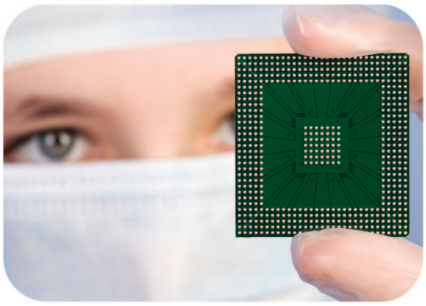

TRUST—we provide the best for you.

Flanders®
FOREMOST IN AIR FILTRATION

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FOREMOST IN AIR FILTRATION

Founded in 1950 by A. R. Allan, Jr.—Flanders manufactured filters for ventilating systems of atomic power reactors and nuclear fuel manufacturing facilities. Extensive growth with filtration for film manufacturing including HEPA and ASHRAE grade filters began to take place during 1960. Flanders developed its own process and facilities for manufacturing high efficiency media in the mid 1960's and continues to manufacture some of its own media today. Late 1960's, Flanders moved its operations from New York to North Carolina, where the company is headquartered today. Tremendous research and development over the years enabled Flanders to enter new markets including pharmaceutical and semiconductor industries.

Acquisitions' including Precisionaire, Air Seal, and Eco-Air has allowed Flanders to continue increasing market-share within the air filtration industry. Flanders has more manufacturing square footage than any other manufacturer in the United States. Those facilities are located strategically throughout the U.S., with additional facilities in other countries.

Flanders has expertise in design, manufacturing and delivery of low efficiency, high efficiency and containment filtration products. For over 35 years, Flanders remains the prime manufacturer of HEPA and HEGA containment systems for the most advanced military, pharmaceutical, hospital, and biotech lab facilities. Flanders sets the standard for the control of nuclear, biological and chemical airborne hazards. These design capabilities have proven to provide the best value for the application.

1

1. Glove Boxes & Pharmaceutical Isolators

- Perfect for creating a safe and controlled work environment
- Used for exhaust air and supply air
- Customize your specifications with hardware, controllers and accessories
- Designed in a wide variety of sizes
- Features include high surface finish, rounded corners, shielding and numerous gloveports
- Pharmaceuticals
- Radiological
- Research
- Industry

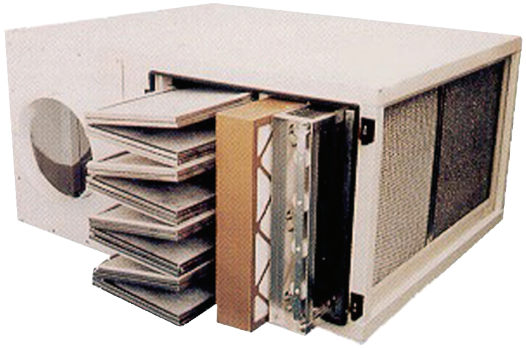
2. Custom Air Handlers: Air Seal

- Multi-stage housings
- Custom sizes
- Stainless or aluminum construction
- High pressure units
- Explosion proof controls

3. Fan Pack II: Air Seal

- Variety of gas and particulate filtration
- Multi-stage filtration
- Stainless or aluminum construction
- Supply or exhaust applications
- Wide variety of fan sizes
- Gauges and other options available

2



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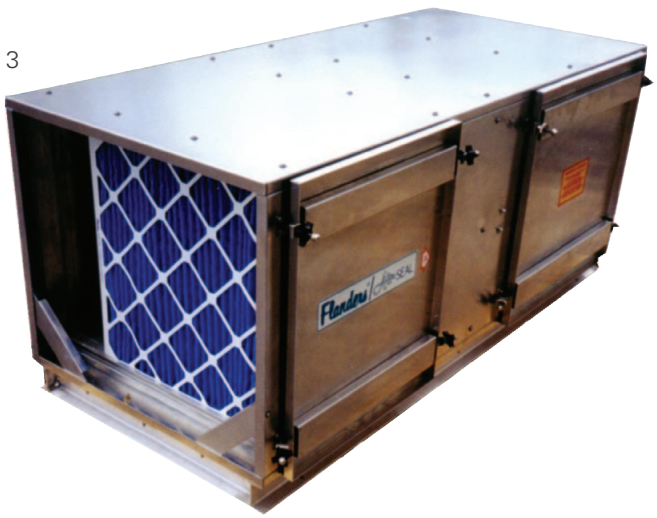

1. Containment: Dampers

- Bubble-tight isolation dampers
- Flat blade and dish type
- Standard, manual hand wheel actuator
- Optional, pneumatic or electric actuators available
- Variety of sizes and configurations available

1

2. Containment: Bag-In/Bag-Out Housings

- Safe change removal of contaminated filters
- Fluid or Gasket seal applications available in the following designs:
  BF-Bag-In/Bag-Out Fluid Seal
  BG-Bag-In/Bag-Out Gasket Seal
  KF-Non-Bag-In/Bag-Out Fluid Seal
  KG-Non-Bag-In/Bag-Out Gasket Seal
- To contain prefilters, HEPA filters and carbon adsorbers
- Stainless steel construction
- ASME AG-1, N-509 and N510
- ASME NQA-1 Quality Assurance Program
- ASME Section IX
- Variety of sizes and configurations are available
- Non-bag-out containment housing also available
- System can be provided with in-place test sections
- Vertical and Horizontal Air Flow Designs
- Many options available

2

3. Containment: Custom Engineered Systems

- Standard products arranged to customer's application
- Special application available
- In-place test sections for efficiency or scan testing
- Self-contained systems available
- Vertical or horizontal airflow directions

3

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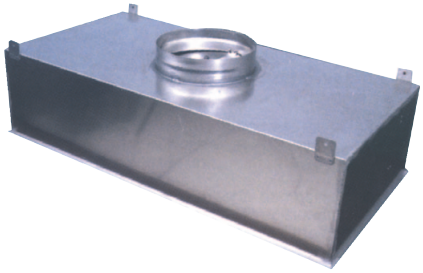
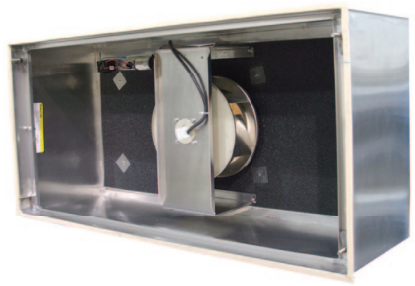


4



1. Cleanroom Dimple Pleat®

- 100% separatorless and mini-pleat filters
- Efficiencies from H10 - U16 per EN1822
- No particle generation from fraying of strings or strips
- Superior appearance and state of the art testing
- UL 900 Class 1 and Factory Mutual Approved

2. ESD Model 22 Channel Hood

- Room-side replaceable terminal filter hood for pharmaceutical and biotech cleanrooms
- Damper can be adjusted in increments of 10%
- Unit has a differential pressure of 35 Pa with aerosol injection installed
- Velocity uniformity within 5%
- All welded construction

3. Model 22 Channel Hood

- All welded terminal hood
- Ideal for pharmaceutical and biotech cleanrooms
- Fluid-seal design to prevent bypass leakage
- Designed for installation in T-bar or gypsum board ceilings
- Room side replaceable

4. Model A39 Airvelope

- Energy efficient, self-powered HEPA filter module
- Room side replaceable HEPA filter
- Delivers ISO Class 5 or better
- All-aluminum housing is lightweight and resistant to corrosion
- Stainless steel available

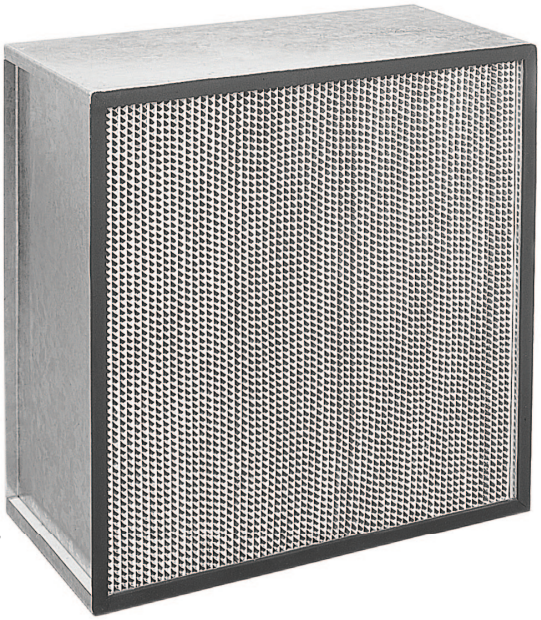
5. Portable Cleanrooms & Plenum System

- 304 & 316 stainless steel construction
- Delivers ISO Class 5 or better
- Custom sizes and designs available
- Flush or teardrop lighting
- Sprinkler penetrations

5

1

Pureform Separatorless



Aluminum Separator

1. Alpha Cell

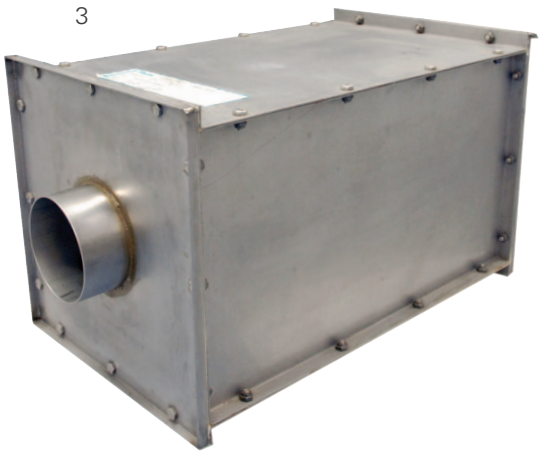
- Standard and high capacity HEPA filter
- Filter efficient from H10 - U16 per EN 1822
- Fluid seal or gasket seal available
- Casing materials available:
  Stainless steel
  Mild steel
  Timber
- Standard and custom sizes available
- High temperature available
- Available with aluminum separators or with separatorless media
- UL 586 available and UL 900

2

2. Radial Flow

- HEPA filter
- Filter efficient from H12 per EN 1822
- 100% separatorless media
- Standard and odd sizes available
- UL Class 1 and UL 586 available

3



3. Nipple Connected

- HEPA filter
- Filter efficiencies from H10 - U15 per EN 1822
- Available with aluminum separators or with separatorless media
- Available with stainless steel or wood frame
- Standard and odd sizes available
- UL Class 1 and UL 586 available

1

1. PF-1 Frame

- Universal filter holding frames
- Accepts any standard size panel, box or header type filter
- Positive sealing integrity with side wall mounted fasteners
- Gasket seal
- Standard construction: 16 gauge galvanized
- Optional construction: 304 stainless steel

2

2. Alpha Frame

- Permanent holding frames for HEPA filters
- Constructed of all-welded 14-gauge galvaneal steel
- 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
- Aluminum and stainless steel options available
- Available in gasket and fluid seal
  B1- gasket seal
  A4 - fluid seal

3. Super-Flow® 24

- High velocity, low airflow resistant HEPA filter
- Wet-laid microfine fiberglass media
- Lower operating cost with pressure drop of 250 Pa at the rated flow
- 4078 m2/hr or 1130 l/s @ 250 Pa on full size
- Available in aluminum, galvaneal or stainless steel frames and with gasket seal or fluid seal design
- Filters are rated H13 per EN 1822

3

As the only manufacturer that makes it's own media, Flanders maintains direct quality control over the filter's most critical component.

1. Surecarb 90

- Total detention carbon filter housing
- Higher removal rate of contaminants than low-efficiency partial bypass-type systems
- Available in a variety of chemisorptive media or HMZD panels
- Airflow may be upstream or downstream

2. Pureseal Front Access

- Combines prefilters, primary filters and gas phase in a single unit
- Rugged 16 ga. galvaneal frames
- Easy field assembly
- Uses HMZD bonded carbon panels to eliminate carbon settling and dusting
- Unique, simple wedge system ensures sealing

3. HEGA Carbon Adsorber

- High Efficiency Gasket Adsorber
- Premium service
- Disposable, Replaceable or Refillable
- Available in T-304 stainless steel and polystyrene
- Cinersorb high efficiency gas adsorber constructed of polystyrene frame allows disposal by incineration
- Available in standard sizes and custom configurations
- Available in gasket or fluid seal

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3

Polystrene Frame

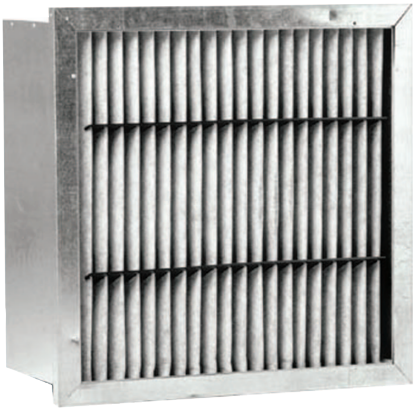
Stainless Steel Frame

1

1. FCP Carbon Pleat

- Designed for removal of malodorous compounds at low concentration levels
- Exceptional performance compared to slurry media or carbon/polyester pads
- Available in standard capacity and high capacity models in 51mm and 102mm depths
- Standard capacity media has a carbon mass loading of 250 g/m2 of material
- High capacity media has a carbon mass loading of 500 g/m2 of material
- Available with three contaminant specific activated carbon products: VOC's, Acid Gases, and Alkaline Gases

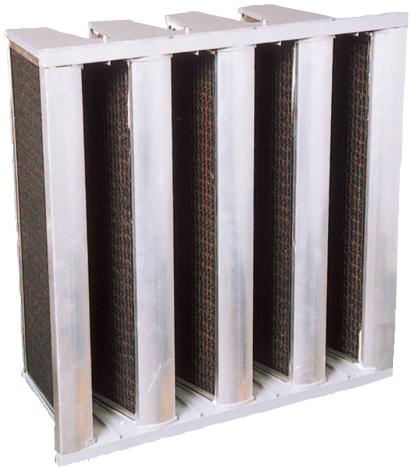
2



2. Vapor Clean

- Activated carbon adsorber for gases and vapors
- Designed for removal of molecular contaminants at low concentration levels while utilizing dry processed carbon composite media (DPCC)
- Available with five contaminant specific DPCC's
- Three styles available: box, single, double header

3



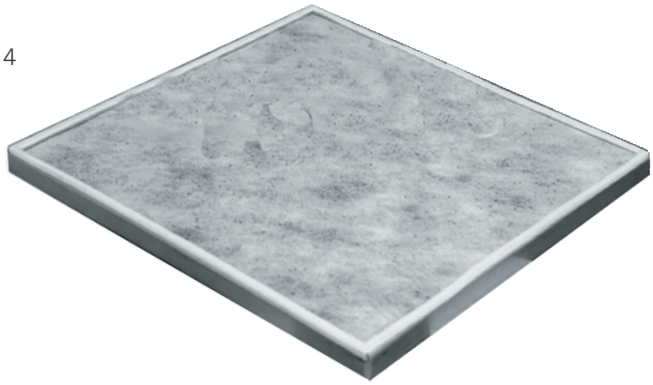
3. Super-Flow® VC

- Designed for gaseous contamination control in both new and existing HVAC systems.
- Total detention capability with all air passing through the carbon beds
- Entire cell is disposable so installation is clean, quick and easy

4. HMZD

- High Mass Zero Dust bonded carbon panels
- Fabricated from 100% virgin coconut shell activated carbon with a minimum 60% CTC activity
- Provides superior adsorption performance as there is no settling within the carbon bed
- HMZD panels clean the air – no final filters are required

4



1. Super-Flow® V

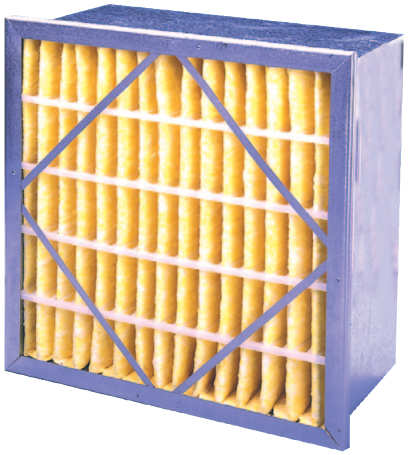
- Energy efficient mini-pleat filter
- Moisture-resistant micro-fine fiberglass media
- Premium ratio of media to nominal face area
- Lowest clean pressure drop for energy savings
- Available with header frame
- Operating limits: 71°C (160°F) and 100% RH continuous duty
- F6 - F9 according to EN 779

1

2. Rigid Air

- Lofted micro-fine fiberglass or synthetic media
- Two styles available: box or single header
- Optional Class 1 listed are available with metal inserts and fiberglass media
- Operating limits: 82°C (180°F) and 100% RH
- EN 779
- UL Class 2 listed

2



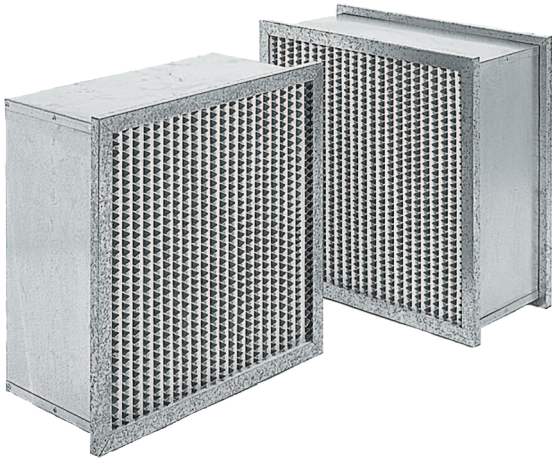
3. PrecisionCell

- Rigid box filter with urethane seal
- Moisture-resistant micro-fine fiberglass paper
- Three styles available: box, single, double header
- Operating limits: 121°C (250°F) and 100% RH
- EN 779
- UL Class 1 listed

4. PrecisionCell II

- Extended surface mini-pleat filter
- Incinerable/shred-able with no metal components
- Space-saving 102 mm thickness for installation flexibility
- Rugged moisture-resistant bonded frame
- Unitized pack for rigidity
- Ideal for VAV systems or turbulent flow conditions
- Operating limits: 71°C (160°F) and 100% RH
- EN 779
- UL Class 2 listed

3



Flanders is one of the oldest manufacturers specializing in high quality air filtration.

4

1

1. Precision Pak XDH

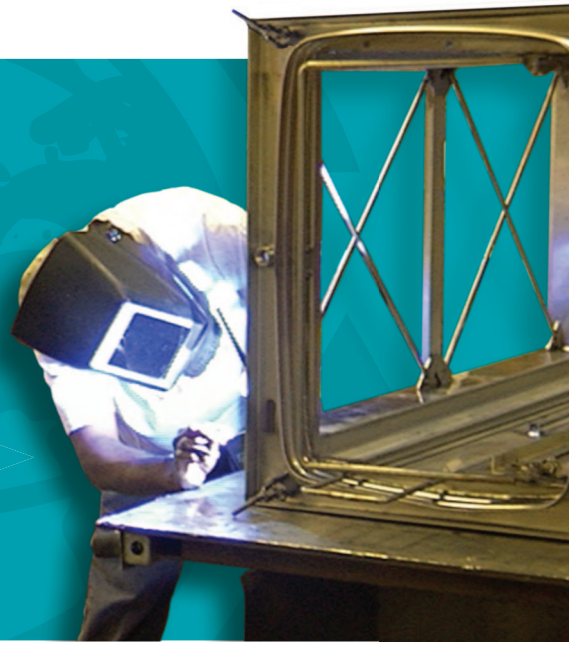
- Semi-rigid, premium dust holding capacity bag filter
- Dual stage gradient density electrostatic synthetic media
- Ultrasonically sealed linear stitched pockets
- Available in wide range of depths and face sizes
- Operating limits: 82°C (180°F) and 100% RH
- F5 - F8 according to EN 779
- Available in UL Class 2

2

2. Precision Pak

- Semi-rigid, basic dust holding capacity bag filter
- Lofted fiberglass or micro-fine synthetic
- Ultrasonically sealed linear stitched pockets
- Available in wide range of depths and face sizes
- Operating limits: 82°C (180°F) and 100% RH
- F5 - F9 according to EN 779
- Available in UL Class 2

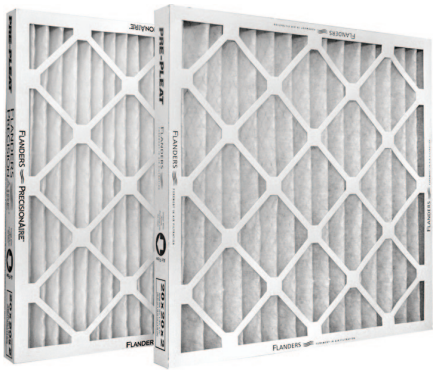
Flanders—keeping air quality at its purest for 60 years.



1. Pre Pleat 40

- Medium efficiency pleated panel filter
- 100% synthetic, hydrophobic (non-moisture absorbing) fibers
- High-temp and Class 1 models available
- Available in UL Class 2
- G4 according to EN 779
- Available depths 25mm, 51mm, and 102mm
- Low end pleat available

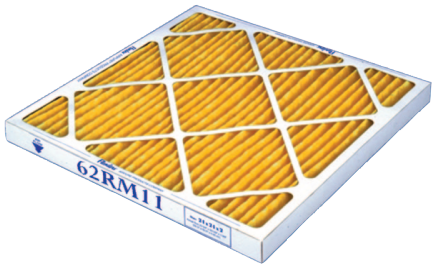
1



2. Pre Pleat 62R M11

- Medium efficiency pleated panel filter
- Ultra-high performance bi-component synthetic media
- Premium efficiency and arrestance at low pressure drop
- V-Wedge pleats for full media usage
- Available in UL Class 2
- Available depths: 25mm, 51mm, and 102mm
- F6 according to EN 779

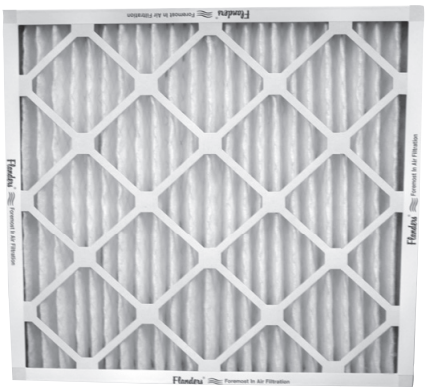
2



3. Pre Pleat M13

- Premium efficiency pleated panel filter
- Ultra-high performance bi-component synthetic media
- Premium efficiency and arrestance at low pressure drop
- V-Wedge pleats for full media usage
- Available in UL Class 2
- Available depths 51mm and 102mm
- F7 according to EN 779

3

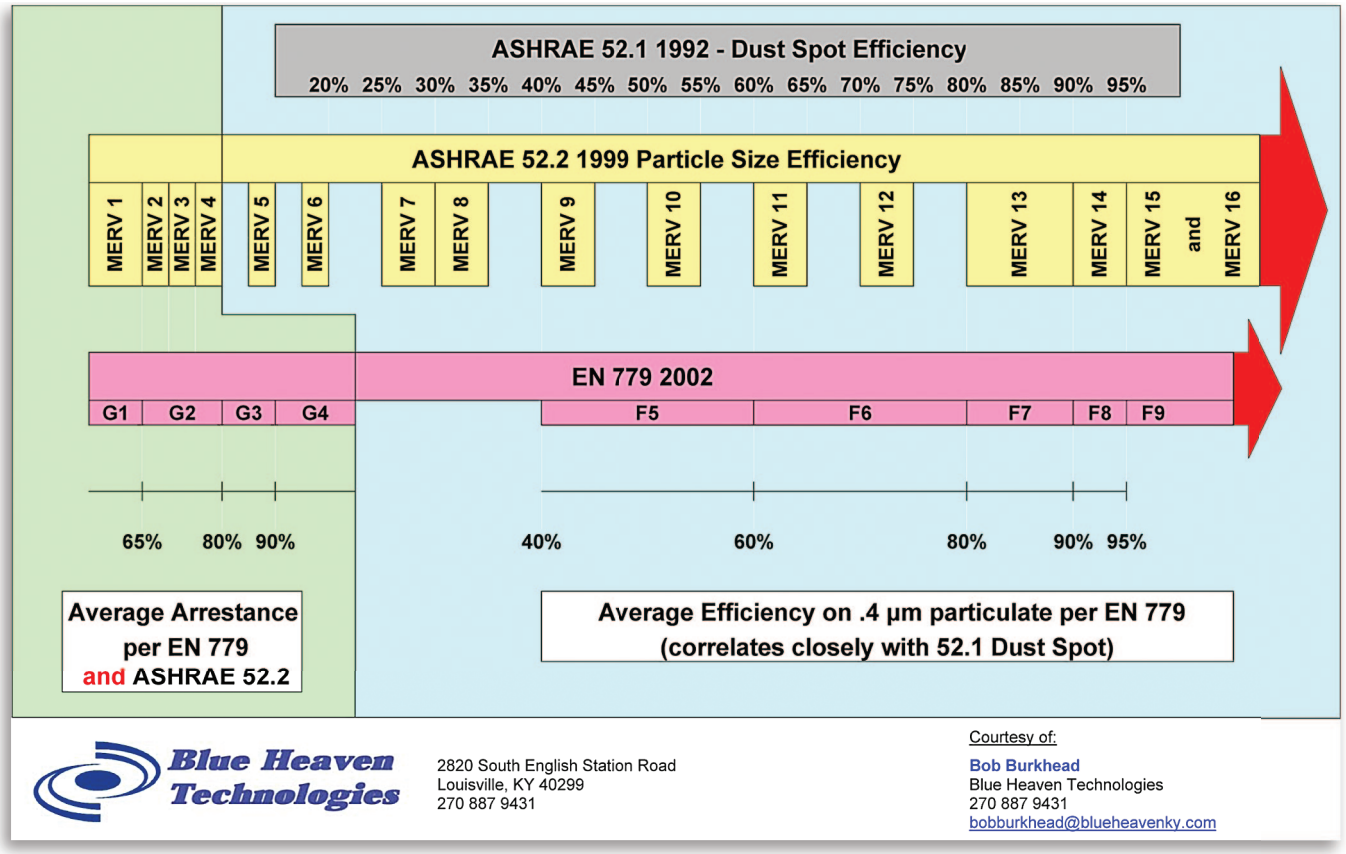


Filter Efficiency Guide

(1) Arrestance	(1) Efficiency	(2) MERV	3) European Efficiency Guide	Filter Type	Flanders Product Selection
95-98%	25-40%	MERV 7-8	G4	Pleated Filters	Pre Pleat 40 Economy, Pre Pleat 40
99%	50-60%	MERV 9-10	F5	Pleated Filters	Pre Pleat 40 CL 1, Pre Pleat 40 HT
				Extended Surface Pocket Filters	PrecisionPak, PrecisionPak XDH
				Extended Surface Rigid Cell Filters	Rigid Air
99%	60-70%	MERV 10-11	F6	Pleated Filters	Pre Pleat 62RM11
				Extended Surface Pocket Filters	PrecisionPak, PrecisionPak XDH
				Extended Surface Rigid Cell Filters	Rigid Air, Super-Flow Q, Super-Flow V, PrecisionCell, PrecisionCell II, PrecisionCell M, PrecisionCell MSH, PrecisionCell HT, PrecisionCell GT
99%	70-80%	MERV 12-13	F6	Extended Surface Pocket Filters	PrecisionPak, PrecisionPak XDH
99%	80-85%	MERV 13	F7	Pleated Filters	Pre Pleat M13
99%	80-90%	MERV 13-14	F7	Extended Surface Pocket Filters	PrecisionPak, PrecisionPak XDH
				Extended Surface Rigid Cell Filters	Rigid Air, Super-Flow Q, Super-Flow V, PrecisionCell, PrecisionCell II, PrecisionCell M, PrecisionCell MSH, PrecisionCell HT, PrecisionCell GT
99%	90-95%	MERV 14-15	F8	Extended Surface Pocket Filters	PrecisionPak, PrecisionPak XDH
				Extended Surface Rigid Cell Filters	Rigid Air, Super-Flow Q, Super-Flow V, PrecisionCell, PrecisionCell II, PrecisionCell M, PrecisionCell MSH, PrecisionCell HT, PrecisionCell GT
N/A	95% DOP	MERV 16	H11	Extended Surface Rigid Cell Filters	Alpha 95, PrecisionCell M16
N/A	99.97% 99.99%	N/A	H13-14 U15	HEPA	Alpha Cell, Alpha 2000, Alpha HT, Super-Flow 24, Alpha Cell, Alpha 2000, Alpha HT, TH Series
	99.9995%		U15	ULPA	Alpha Cell, Alpha 2000, Alpha HT, TH Series, Dimple Pleat
	99.99999%		U16	ULPA	TH Series, Dimple Pleat

(1) Arrestance and Dust Spot Efficiency ratings are based on the ASHRAE 52.1–1992 test method.
(2) Minimum Efficiency Reporting Value (MERV) ratings are based on the ASHRAE 52.2 test method.
(3) European Efficiency Classes are based on European Standards EN779 and EN 1882.

Notes:


ASHRAE 52.1 1992 - Dust Spot Efficiency
20% 25% 30% 35% 40% 45% 50% 55% 60% 65% 70% 75% 80% 85% 90% 95%
ASHRAE 52.2 1999 Particle Size Efficiency
MERV 1
MERV 2
MERV 3
MERV 4
MERV 5
MERV 6
MERV 7
MERV 8
MERV 9
MERV 10
MERV 11
MERV 12
MERV 13
MERV 14
MERV 15
and
MERV 16
EN 779 2002
G1
G2
G3
G4
F5
F6
F7
F8
F9
65% 80% 90%
40% 60% 80% 90% 95%
Average Arrestance per EN 779 and ASHRAE 52.2
Average Efficiency on .4 µm particulate per EN 779 (correlates closely with 52.1 Dust Spot)
Blue Heaven Technologies
2820 South English Station Road
Louisville, KY 40299
270 887 9431
Courtesy of:
Bob Burkhead
Blue Heaven Technologies
270 887 9431
bobburkhead@blueheavenky.com

Notes:

TRUST—we provide the best for you.

Flanders®
FOREMOST IN AIR FILTRATION

Representatives of Flanders Corporation are located throughout the world.

Your closest representative's office may be found by contacting our manufacturing and sales department.

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Flanders Corporation continues to research and develop product improvements and reserves the right to change product designs and specifications without notice.