

## General:

PrecisionCell II extended surface minipleat filters now offer the end user high efficiency filtration performance in minimal media pack depths of 4 inches deep in 60-65% (MERV 11), 80-85% (MERV 13), and 90-95% (MERV 14-15), and are available in a corrosion resistant metal frame (M) for box style or optional metal frame with a single 13/16" header (MSH).

Due to the rigid minipleat technology in combination with the metal frame design, PrecisionCell II's are the ideal choice for use in existing and new installations where space is limited or where upgrading filter efficiency levels are required in existing units. Variable air volume systems, turbulent airflow, or high humidity applications where conventional filters fail, are good choices for upgrading to PrecisionCell II's in metal frame configurations.

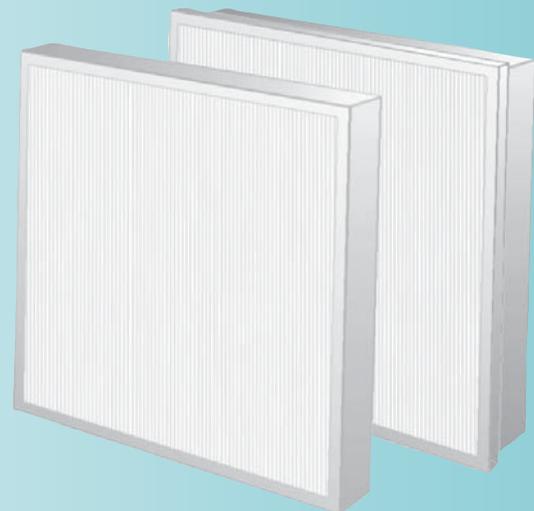
PrecisionCell II 4 inch deep in M and MSH designs are designed to be operated at 500 FPM. Both M and MSH Model PrecisionCell II's are offered in all standard sizes. Special sizes are not available.

All PrecisionCell II models utilize state of the art minipleat technology which uses media separators made from thermoplastic glue beads to allow precision spacing between the moisture-resistant microfine fiberglass media. The adjacent polymer bead separators cure into durable, hard strips separating the media folds thereby creating a rigid pack assembly which maintains excellent pleat spacing continuity over the life of the filter.

Both PrecisionCell II metal-framed models are bonded and sealed into a corrosion-resistant, metal frame with an expanded metal face grille on the downstream side to prevent media pack oscillation or blowout. Both metal framed models are the ideal choice where HVAC Systems pull in 100% humid outside air such as Hospitals.

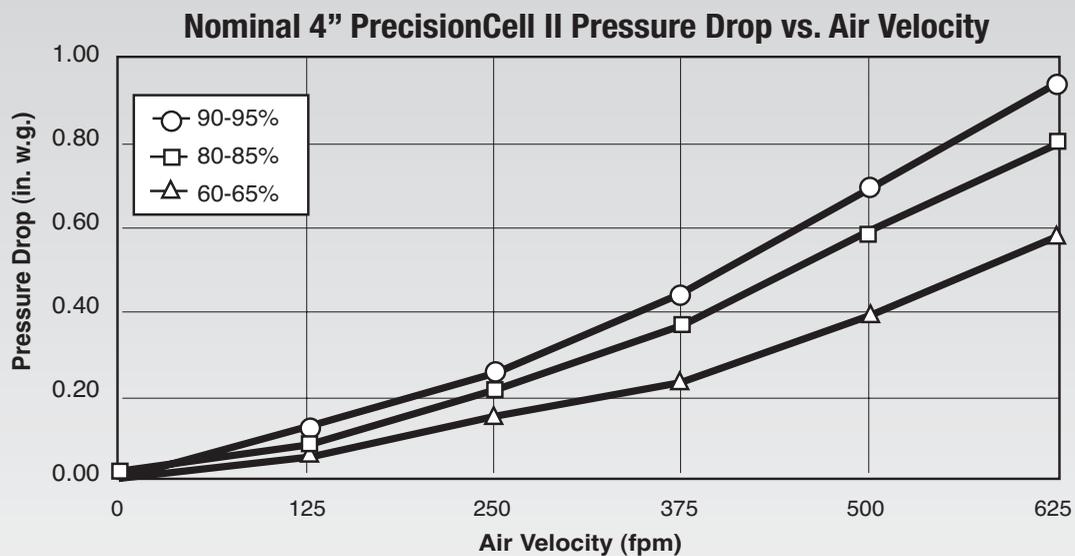
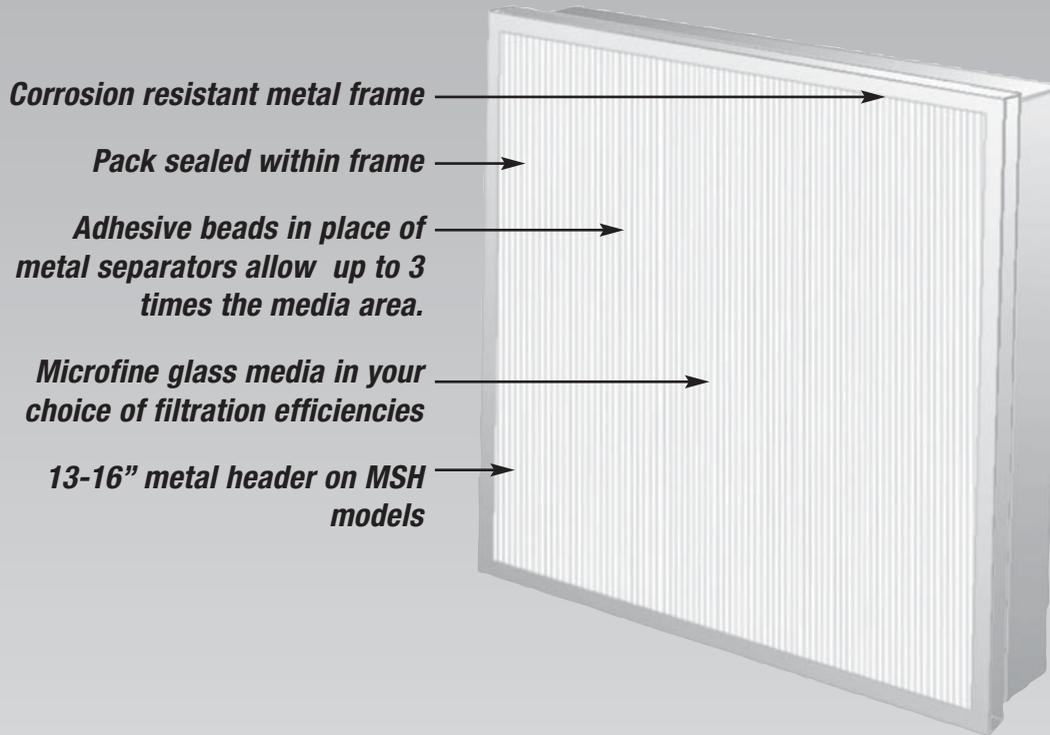
## Important Features

- High Efficiency Filtration in minimal, space-saving design.
- This unique shallow-depth pack compacts up to 2 times the media area found in conventional 12 inch deep filters.
- 3-to-1 ratio in shipping, storage, handling and disposal costs over conventional 12" deep cells
- Excellent choice for upgrading older systems at a fraction of the cost.



## 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.



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

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## Standard Box Style

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

## With Header

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

### Notes

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

## 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" PrecisionPak bag filters and 12" Rigid-Air filter to a 4" PrecisionCell filter when they are installed with 2" 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" x 24" size as an example, a carton of four PrecisionCell II 4" filters has a volume of 5.3 cubic feet and a weight of 26 lbs. Compare this to four 12" 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" H x 24" W and 24" H x 12" W face sizes. These are the most widely used and stocked sizes. This allows for 12" increments in height and width of the filter bank and insures that replacement cartridges will be readily available.

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

### HEPA Prefilters

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

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

## PrecisionCell II M and MSH Component Chart

<b>88655.</b>	<b>04</b>	<b>20</b>	<b>24</b>	<b>MSH</b>	<b>D</b>
<b>Efficiency Series</b>			<b>Frame Style</b>		
89655. - 90-95%			MSH - Metal		
88655. - 80-85%			w-13/16"		
86655. - 60-65%			Single Header		
<b>Nominal Depth</b>			<b>Gasket Location</b>		
04 - 3.75" Deep			D - Downstream		
<b>Nominal Width</b>			U - Upstream		
20 - (19-3/8") wide			V - One Vertical Side		
<b>Nominal Height</b>					
24 - (23-3/8") tall					

### Guide Specifications

#### 1.0 General

- 1.1 Medium and high efficiency extended surface filters shall be PrecisionCell II (M) (MHS) mini-pleat panel filters as manufactured by Flanders Precisionaire.
- 1.2 Filter sizes, efficiencies and capacities 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 of water-laid microfibre fiberglass media containing a water repellent binder formed into closely spaced pleats held in position by adhesive bead separators.

- 2.3 The filter pack shall be enclosed and sealed within a corrosion-resistant metal frame.
- 2.4 PrecisionCell II MSH filters shall have a single 13/16" diameter header on the air entering side.

#### 3.0 Performance

- 3.1 Initial and final resistances shall not exceed the scheduled values.
- 3.2 Media area must equal or exceed that of the specified filter
- 3.3 The average efficiency shall be as determined by ASHRAE Standard 52.1 and 52.2 test methods.
- 3.4 The manufacturer shall guarantee performance as stated in the literature within tolerances as outlined in Section 7.4 of ARI Standard 850.

**Flanders PrecisionAire**  
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