

Precision Pak XDH

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

Bulletin PB1102-1206

General

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

Ideal for VAV

Precision Pak XDH filters in depths up to 22" are semi-rigid and thus ideally suited for variable air volume systems. Precision Pak XDH filters are UL 900 Class 2 listed.

Dual Phase Media

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

holding (XDH) capacity. Further, the media is non-shedding and performs exceptionally well in high velocity and turbulent applications.

Extra High Dust Holding

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

Physical Data

Media: Dual Phase, 100% Synthetic

Media Backer: Non-woven polyester

Pocket Sealant: Thermoplastic resin

Pocket Retainer: Corrosion Resistant steel

Header: 13/16" wide corrosion resistant

Operating Limits: 100% RH and 180° F

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

Important Features

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



95% XDH Synthetic Media Filters MERV 14

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

85% XDH Synthetic Media Filters MERV 13

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

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

How to Select a Precision Pak XDH Filter:

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

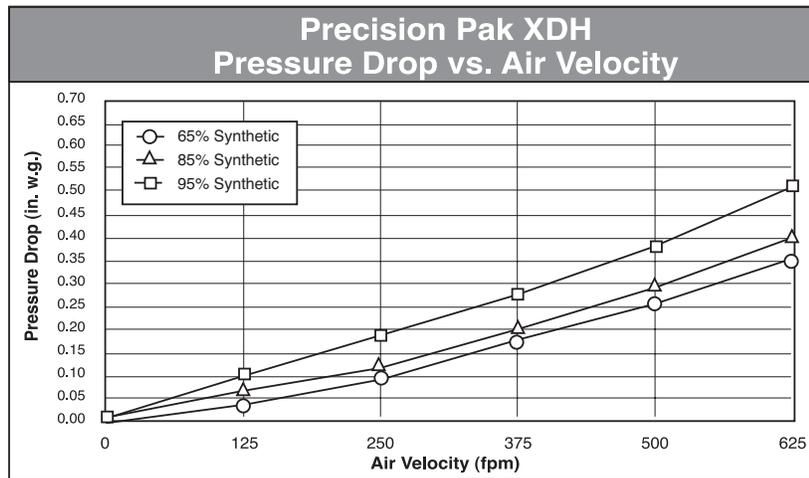
65% XDH Synthetic Media Filters MERV 11

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

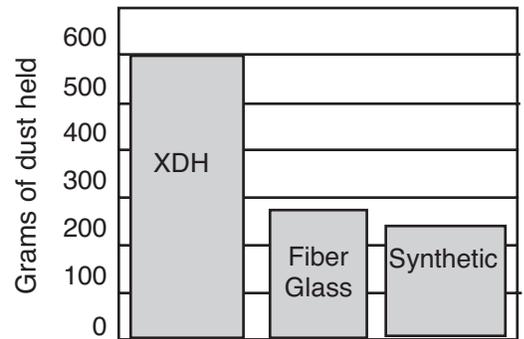
Performance values stated may be averages typical of the products listed. Contact factory for actual performance test reports on specific products.

How to Select a Precision Pak XDH Filter:

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



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



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

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Application Guidelines

Precision Pak XDH filters should be selected using 24" x 12" and 24" x 24" face sizes. This allows for 12" 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" x 12" 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.

Installation Considerations

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

Astr 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.

Gasketed Headers

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

To specify Precision Pak 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.

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.
- 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 micro-fine synthetic media encased in a thin non-woven polyester backer mat.
- 2.2 Open area on the filter face for air passage shall be not less than 90%.
- 2.3 Flexible internal support stitching shall maintain individual pockets in a controlled form under all rated air flow conditions. Stitching shall be sealed with thermoplastic 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 and 52.2 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.

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