





SPECIALTY FILTRATION



-  CARBON PLEAT (Pages 2-3)
-  CARBON HONEYCOMB (Pages 4-5)
-  FP GAS PHASE (Pages 6-7)
-  NESHAP / EPA METHOD 319 (Page 8-9)



CARBON PLEAT

- ❖ Dual Purpose: Filters particulate and absorbs odor
- ❖ Effective gas phase filter for intermittent gas applications
- ❖ Excellent filter to determine if carbon filters will help remove the odor
- ❖ Low pressure drop
- ❖ Disposable, easy installation, low service cost
- ❖ All filters wrapped and sealed in protective plastic bags to maintain filter viability



DESCRIPTION

The Air Handler Carbon Pleat filters are designed for the control of intermittent odor problems. Carbon Pleated filters remove a wide range of odors and common indoor air pollutants. The advanced media has improved capability to absorb nuisance odors.

The filter's construction consists of pleated non-woven/polyester media, impregnated with an activated carbon. The pleated filter pack is enclosed in a heavy duty, moisture resistant (beverage board) die-cut frame that will not

crack, warp or distort under normal operating conditions.

BENEFITS

In some light duty applications, the effectiveness of carbon pleated filters can equal many long-term solutions used for controlling odor problems. Carbon Pleated filters can be used as a low cost method to verify the potential effectiveness of carbon for controlling odors. The Carbon Pleat receives an efficient removal of particulate MERV 6 per ASHRAE Standard 52.2-2007.

APPLICATIONS

The Air Handler Carbon Pleat is well suited for use where gas contaminants are low and or intermittent. Provides relief of odors created by cigarette smoke, industrial processes, copier, pets and musty areas.

These filters are well suited for use in air make-up systems and re-circulation applications in office buildings, hospitals, airports, food courts and manufacturing facilities.

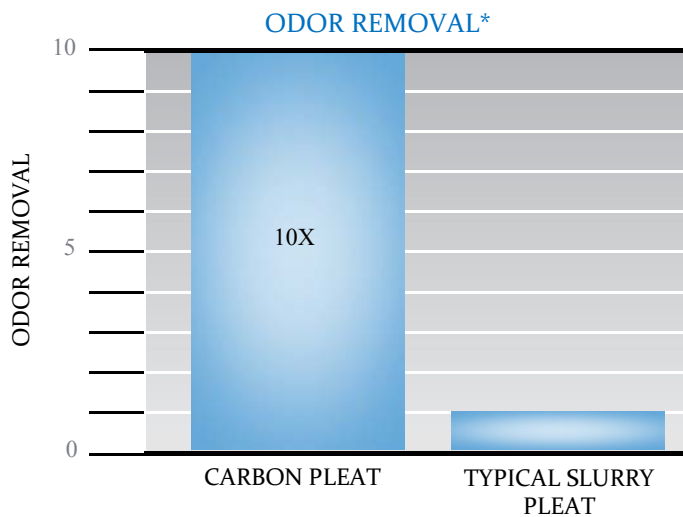


More Filters. More Sizes. More Applications.

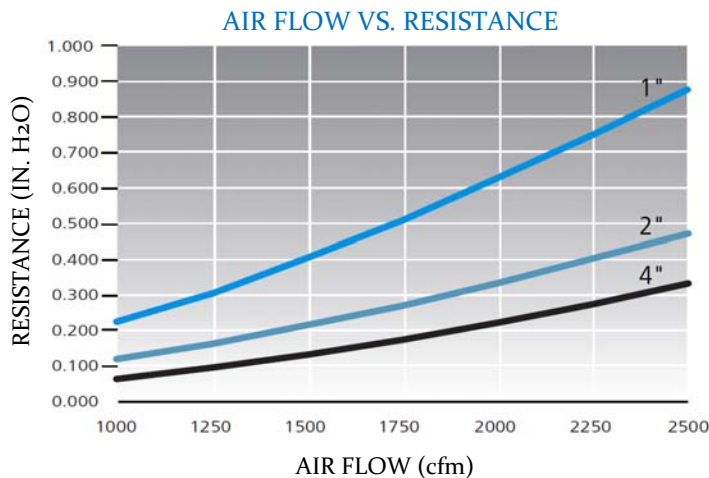
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CARBON PLEAT

ODOR REMOVAL



*Amount of gas or odor removed at 50% breakthrough given 80ppm of Toluene @ 40 (media velocity)



*24 x 24 filter

DIMENSIONS & PART #S

Nominal Size (In.)			Initial Resistance @ 250 fpm ("w.g.)	Initial Resistance @ 500 fpm ("w.g.)	Grainger #
H	W	D			
10	10	1	0.23	0.63	6B915
10	20	1	0.23	0.63	6B914
12	12	1	0.23	0.63	6B912
12	20	1	0.23	0.63	6B911
12	24	1	0.23	0.63	6B910
14	20	1	0.23	0.63	6B907
14	24	1	0.23	0.63	6B905
14	25	1	0.23	0.63	6B904
15	20	1	0.23	0.63	6B902
16	16	1	0.23	0.63	6B900
16	20	1	0.23	0.63	6B899
16	24	1	0.23	0.63	6B896
16	25	1	0.23	0.63	6B894
18	20	1	0.23	0.63	6B891
18	24	1	0.23	0.63	6B890
18	25	1	0.23	0.63	6B887
20	20	1	0.23	0.63	6B886
20	24	1	0.23	0.63	6B883
20	25	1	0.23	0.63	6B880
22	22	1	0.23	0.63	6B877
24	24	1	0.23	0.63	6B876
25	25	1	0.23	0.63	6B873
10	20	2	0.13	0.34	6B913
12	24	2	0.13	0.34	6B909
14	20	2	0.13	0.34	6B906
14	25	2	0.13	0.34	6B903
15	20	2	0.13	0.34	6B901
16	20	2	0.13	0.34	6B898
16	24	2	0.13	0.34	6B895
16	25	2	0.13	0.34	6B893
18	24	2	0.13	0.34	6B889
20	20	2	0.13	0.34	6B885
20	24	2	0.13	0.34	6B882
20	25	2	0.13	0.34	6B879
24	24	2	0.13	0.34	6B875
25	25	2	0.13	0.34	6B872
12	24	4	0.07	0.23	6B908
16	25	4	0.07	0.23	6B892
20	20	4	0.07	0.23	6B884
20	24	4	0.07	0.23	6B881
20	25	4	0.07	0.23	6B878
24	24	4	0.07	0.23	6B874



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CARBON HONEYCOMB

- ❖ Dual function: Odor absorption and particulate filtration
- ❖ Granular activated carbon to remove odorous and irritating gaseous contaminants
- ❖ Honeycomb construction ensures low air flow resistance
- ❖ Effective gas phase filtration in a compact design
- ❖ Individually wrapped in plastic



DESCRIPTION

These combination particulate and carbon filters are designed for the control of intermittent odor problems in re-circulated air applications.

Honeycomb style filters are designed to remove a wide range of odors and common indoor air pollutants. The 1" honeycomb filters are constructed using 0.5" honeycomb with a 0.5" pre-filter pad. The 2" honeycomb filters are constructed using 0.75" of honeycomb with a 1" pre-filter pleat offering medium efficiency.

BENEFITS

The activated carbon presented in the honeycomb filter acts like a porous sponge, collecting and retaining certain chemical compounds on its surface. The ability of activated carbon to absorb a gas or vapor is called its activity.

Carbon used in these filters have a minimum carbon tetrachloride (CCL4) activity of 60% which means it will absorb at least 60% of its own weight of CCL4 vapor under a standard set of conditions. 150°F maximum temperature.

APPLICATIONS

Dual purpose activated Carbon Honeycomb filters are designed to eliminate general odor problems where concentration levels are not extremely heavy. These combination filters offer medium particulate filtration along with an absorbent carbon for fume and odor removal.

The honeycomb style filters are used extensively in office buildings, hospitals, airports, food courts and manufacturing facilities.








More Filters. More Sizes. More Applications.

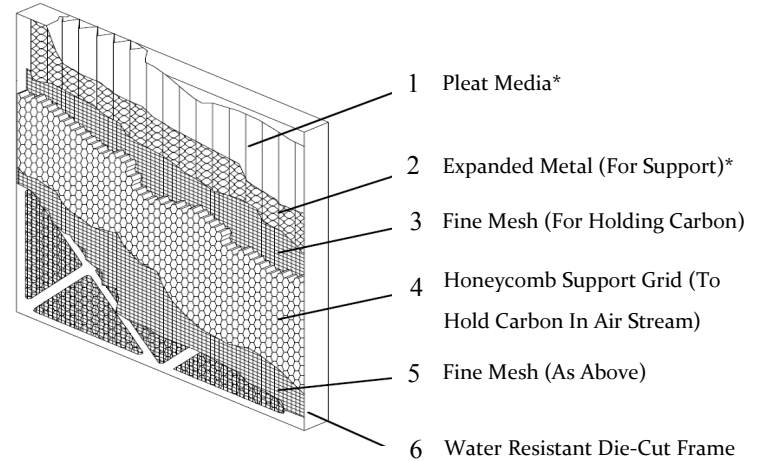
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CARBON HONEYCOMB

ODORS REMOVED

-  Cooking Odors
-  Sewer Odors
-  Gasoline Fumes
-  Environmental Tobacco Smoke
-  Most Volatile Organic Compound (VOC) Odors

FILTER ADVANCEMENTS



*NOTE: For 1" version a poly pad and no expanded metal replace the pleat media

DIMENSIONS & PART #S

50% Carbon Fill (With Pre-filter)				50% Carbon Fill (With Pre-filter)				50% Carbon Fill (No Pre-filter)			100% Carbon Fill (No Pre-filter)			100% Carbon Fill (With Pre-filter)			
H	W	D	Grainger #	H	W	D	Grainger #	H	W	D	Grainger #	Grainger #	Grainger #	H	W	D	Grainger #
10	10	1	6B869	10	20	2	6B867	10	20	1	2JTW5	2JUA5	2JTR1	10	20	1	2JUA5
10	20	1	6B868	12	24	2	6W741	12	24	1	2JTW7	2JTR3	2JUT6	12	24	1	2JTR3
12	12	1	6B866	14	20	2	6B863	14	20	1	2JTW9	2JUA7	2JTR5	14	20	1	2JUA7
12	20	1	6B865	14	25	2	6B860	14	25	1	2JTX2	2JUA9	2JTR7	14	25	1	2JUA9
12	24	1	6W735	15	20	2	6B858	15	20	1	2JTX4	2JUC2	2JTR9	15	20	1	2JUC2
14	20	1	6B864	16	20	2	6W742	16	20	1	2JTX6	2JUC4	2JTT2	16	20	1	2JUC4
14	24	1	6B862	16	24	2	6B855	16	25	1	2JTX8	2JUC6	2JTT4	16	25	1	2JUC6
14	25	1	6B861	16	25	2	6W743	16	20	1	2JTY7	2JUC8	2JTT6	20	20	1	2JTY7
15	20	1	6B859	16	25	2	6B852	18	25	1	2JTY1	2JUD1	2JTT8	20	25	1	2JTY1
16	16	1	6B857	18	24	2	6B848	18	24	2	2JTY3	2GJD5	2JTU1	24	24	1	2JTY3
16	20	1	6B857	20	20	2	6W744	20	24	1	2JTY5	2JUD3	2JTU3	24	24	1	2JTY5
16	20	1	6W736	20	24	2	6B849	20	25	2				25	25	1	2JTY5
16	24	1	6B856	20	24	2	6W745	20	25	2							
16	25	1	6W737	24	24	2	6W746	24	24	2							
18	20	1	6B854	25	25	2	6B846	25	25	2							
18	24	1	6B853														
18	25	1	6B851														
20	20	1	6W738														
20	24	1	6B850														
20	25	1	6W739														
22	22	1	6B848														
24	24	1	6W740														
25	25	1	6B847														



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FP GAS PHASE

- ❖ Improve indoor air quality through effective removal of contaminants, odors and gases
- ❖ Available with activated carbon for adsorption, potassium permanganate for chemisorption, or a 50/50 blend of both
- ❖ 100% fill for maximum single pass efficiency and longer service life



DESCRIPTION

The Air Handler FP Gas Phase filter is designed to remove a wide range of odors and common indoor air pollutants at high air flows. Constructed of heavy-duty galvanized steel and plastic, with 3/4" honeycomb media packs, the FP Gas Phase filter can be filled with one of two media or a blend of the two to fit any application.

BENEFITS

The FP Gas Phase filter provides effective odor removal with just a moderate increase in pressure drop.

Using 60% CTC activated carbon, potassium permanganate on zeolite, or a blend of the two, the FP Gas Phase filter removes a broad spectrum of compounds including Volatile Organic Compounds (VOC's), vehicle exhaust, sulfur compounds, ammonia and formaldehyde.

APPLICATIONS

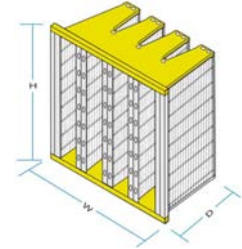
These filters are used in commercial and industrial applications when odors and gases need to be removed to protect people, processes, equipment or artifacts.

With a standard header, it can be used in existing HVAC systems, easily retrofitted or specified for new construction. The dual direction design allows for a front or reverse mount installation, without a reduction in filter performance.



FP GAS PHASE

DIMENSIONS & PERFORMANCE DATA



Activated Carbon (100%)

Contaminants removed by Activated Carbon

Acetone Nitrobenzene Chloroform Gasoline Pyridine Paint Fumes Naphtha Chlorobenzene Toluene Perchloroethylene Methyl Chloroform Methyl Ethyl Ketone Benzene Ozone Methylene Chloride Styrene

H	W	D	Initial Resistance @ 500 fpm ("w.g.)	Media Weight	Shipping Weight	Grainger #
12	24	12	0.51	11	16	2GGY7
20	24	12	0.51	20	27	2GGZ2
24	24	12	0.51	24	32	2GGV7

Potassium Permanganate (100%)

Contaminants removed by Potassium Permanganate Impregnated Media

Acetylene Alcohols Amines Ammonia Mercaptans Nitrogen Oxides Sulfur Oxides

H	W	D	Initial Resistance @ 500 fpm ("w.g.)	Media Weight	Shipping Weight	Grainger #
12	24	12	0.36	14	19	2GHA1
20	24	12	0.36	26	33	2GHA5
24	24	12	0.36	32	40	2GHA9

Activated Carbon / Potassium Permanganate Blend (100%)


Contaminants removed by Activated Carbon / Potassium Permanganate Blend

Acetic Acid Cleaning Compounds Trichloroethylene Animal Odors Cooking odors Urea Auto Exhaust Diesel Fumes Butyric Acid Isopropanol Chlorine Sodium Thiosulfate Chlorine Dioxide Tobacco Smoke

H	W	D	Initial Resistance @ 500 fpm ("w.g.)	Media Weight	Shipping Weight	Grainger #
12	24	12	0.36	13	18	2GGY3
20	24	12	0.36	23	30	2GGZ6
24	24	12	0.36	28	37	2GGX8



NESHAP/EPA Method 319

 The EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) mandated that a new filtration test method be established to determine the efficiency of a filter to remove hazardous pollutants from paint overspray. The EPA guidelines went into effect on September 1, 1998 and continue to set the standard for paint overspray collection systems today. The test method to determine compliance is Test Method 319.

Preferred 1st Stage

Paint Filter Pad



Paint Filter Pad, Polyester media with ECXL style. The media is multilayered, with finer fiber structures downstream in order to enhance depth loading capacity. The multiple layers will avoid face loading as it captures overspray paint with a downstream tackifier.

Approved 2-Stage System

2 Pocket Bag Filter



The recommended 2-stage system consists of a prefilter paint arrestor pad followed by a two pocket bag filter. This two pocket bag filter exceeds the approved EPA Method 319 testing requirements with or without the prefilter pad. The 2-pocket filter is self-sealing and has self supporting pockets. The Media construction is a multi-layered gradient density structure to maximize paint collection and retention.

Approved 3-Stage System

5 Pocket Bag Filter



The recommended 3-stage system consists of a prefilter pad, a 2 pocket filter bag, followed by the EPA Method 319 approved 5 pocket bag filter. The 5 pocket bag filter is self sealing and exceeds the testing requirements with or without the pre-filter pad and two pocket filter bag. The media construction is multi-layered with the downstream layer consisting of a high efficiency synthetic media.



NESHAP/EPA Method 319

DIMENSIONS & PART #S

Nominal Size (In.)			2-Pocket Bag Grainger #
H	W	D	
20	20	15	4YKR4
20	25	15	4YKR5
24	24	15	4YKR6

Nominal Size (In.)			5-Pocket Bag Grainger #
H	W	D	
20	20	12	4YKR1
20	25	12	4YKR2
24	24	12	4YKR3

PERFORMANCE COMPARISON 2-STAGE FILTER

Liquid Challenge—Oleic Acid

Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>2.2 um	>10%	55.4%	41%
>4.1 um	>50%	81.3%	87%
>5.7 um	>90%	92.4%	96%

Initial dP @ 120 fpm Air Handler – 0.045”

Initial dP @ 120 fpm ATI – 0.13”

Solid Challenge—KCI

Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>2.2 um	>10%	55.4%	41%
>4.1 um	>50%	81.3%	87%
>5.7 um	>90%	92.4%	96%

PERFORMANCE COMPARISON 3-STAGE FILTER

Liquid Challenge—Oleic Acid

Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>0.42 um	>65%	83.5%	75%
>1.0 um	>80%	95.0%	87%
>2.0 um	>95%	99.1%	99%

Initial dP @ 120 fpm Air Handler – 0.22”

Initial dP @ 120 fpm ATI – 0.28”

The lower initial dP results in longer life and lower operating costs.

Solid Challenge—KCI

Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>0.70 um	>75%	93.8%	88%
>1.1 um	>85%	97.8%	92%
>2.5 um	>95%	99.5%	98%



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