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BETEC CAD.

Filters



BF3 - Bag Filters

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



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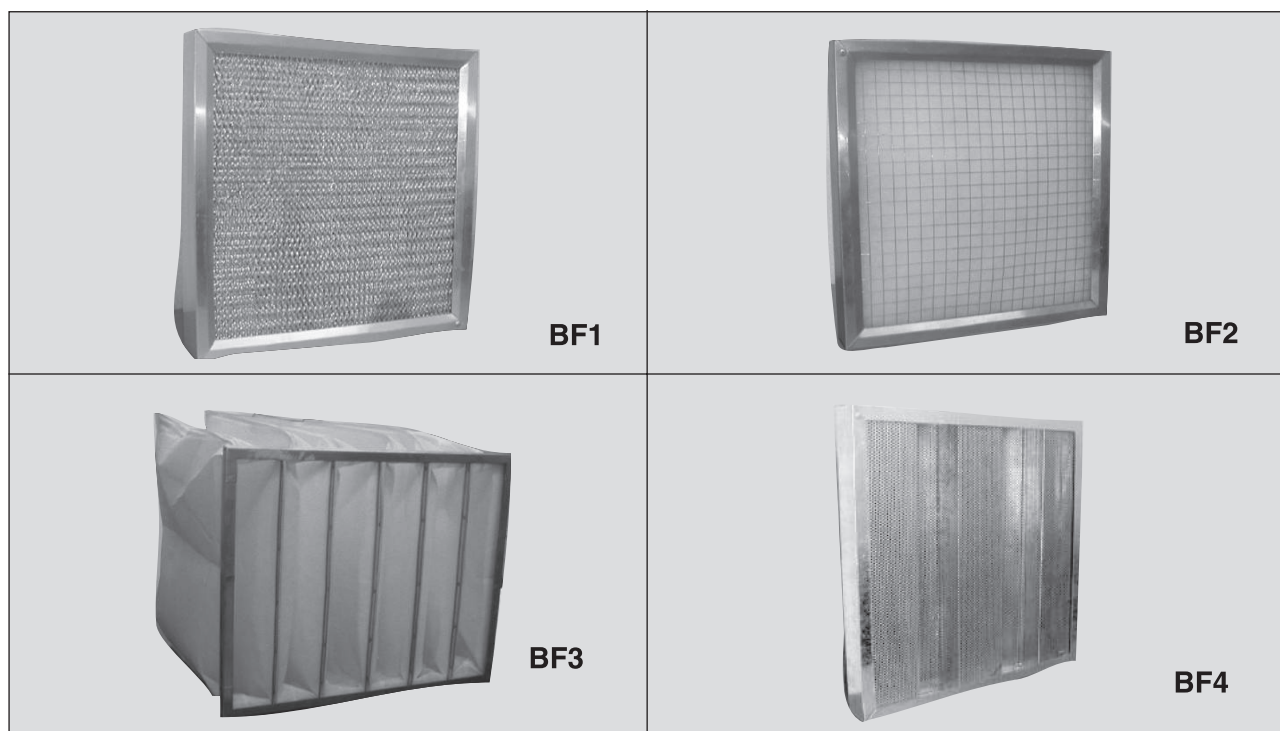
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Filters

BETEC manufactures a complete line of filters for various residential, commercial and industrial applications. These are available in a wide range of standard, special and custom sizes, designs and shapes to meet virtually every air filtration requirement. They are the highest quality and efficiency obtainable and feature for long lasting optimum performance.



Standard Types and Models

Item	Series	Model / Specification	Construction
Filters	BF1*	Aluminium* / S.S Media	Metallic Filters
	BF2	Synthetic Media	Synthetic Filters
	BF3	Polyester Media	Bag Filters
	BF4	Activated Carbon Cells	Carbon Filters
	BF5	High efficiency Media	H.E.P.A. Filters

Material Details

- c All types and models of Filters Frames are available in G.I.*- galvanized sheet steel coating to Z-22 to Z-27 to the standards **JIS 3302 or BS 2989**, stainless steel to **304 2B, 316L** in finish, and aluminum, according to the design conditions.
- c The respective suffix will indicate the type of material construction. **G** - Galvanized steel, **S** - Stainless steel, **A** – Aluminum
- c All Filter units are assembled to ensure airtight operations with low leakage factor of 5 3 %. as per international standards **DW 142 class C**.
- c All Filters are internally sealed and manufactured as per international standards and confirmed to **NFPA 90 A** and **UL 181** standards for erosion.

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Metallic Filters - BF1

Models: BF1A – Aluminum Filter; BF1S – Stainless Steel Filter

BETEC manufactures a wide range of metallic filters with media as Aluminum or Stainless Steel with Galvanized steel, Stainless steel and Aluminum frame construction to serve all kinds of air filtration requirements.

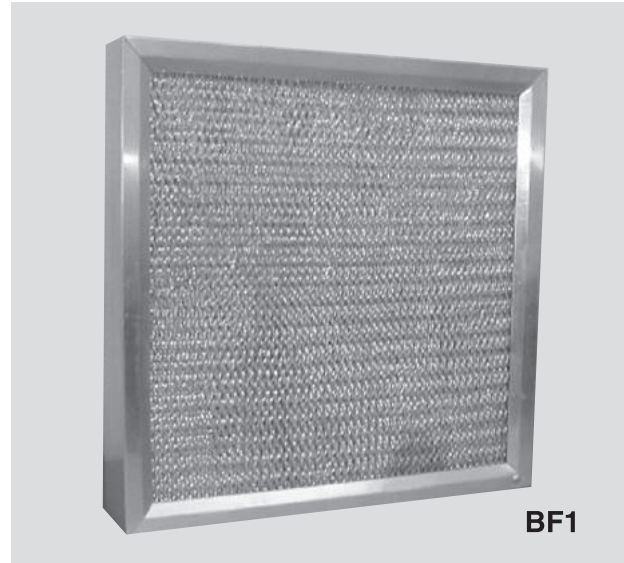
BETEC BF1 Series Metallic Filters:

A* – Aluminum Frame; **S** – Stainless Steel Frame;
G – Galvanized Frame

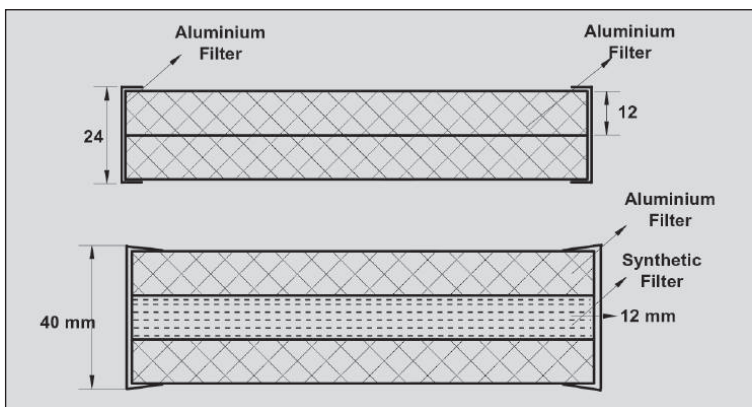
BF1 Series Standard Construction Aluminum*

These are manufactured from formed metal foil that has been expanded from various thickness into a number of openings in different patterns. These varied patterns and layers are built up to form a baffle design. The impingement principle causes grease and dust to become trapped on these adhesive coated baffle surfaces without danger of clogging or pressure loss.

- c Because of the unique baffle pattern they have a low initial resistance and their ability to depth-load rather than surface- load and as a result the resistance builds up which in turn increases the service of the filter.
- c The use of aluminum prevents rust and corrosion and hence better performance is assured.
- c The Aluminum filters can be washed as required. Because of the washable feature and Aluminum construction these filters provide better performance over long periods of time.
- c Light weight, strong aluminum grease filters are available in variety of sizes and shapes. Grease filters for commercial kitchen applications are available in mesh type and baffle type. Circular and Rectangular as well as other shapes are available in accordance with the requirements.
- c Because of the availability of these filters in variety of shapes and sizes for many air-cleaning applications a wide variety of performance characteristics can be achieved.
- c The rust proof aluminum cleans easily by simply flushing with a hose. Warm water is desirable but not required.
- c Due to the unique design and the use of aluminum the filters are high-effective flame arrestors plus high-grease removers.



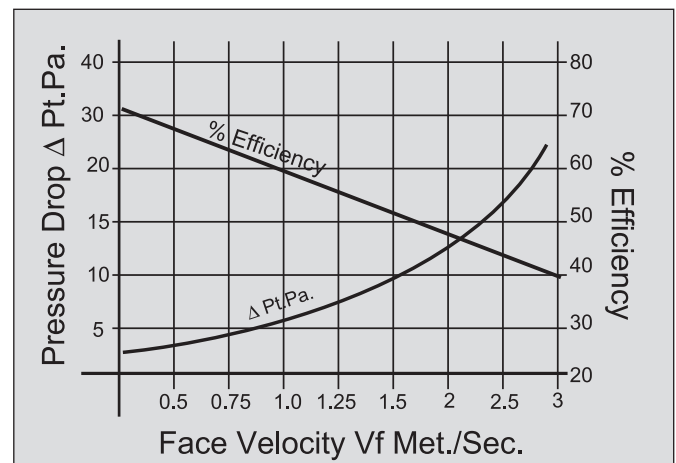
BF1



Model	Media Thick (mm)	Pd Δ Pt (Pa)	Velocity V_f	Efficiency %
B - F1 A	12	6 - 20	1.0 - 2.5	60 - 50
B - F1 A	25	10 - 25	1.0 - 2.5	80 - 70
B - F1 A	40	15 - 35	1.0 - 2.5	90 - 75
B - F1 A	50	22 - 40	1.0 - 2.5	95 - 70
B - F1 S	12	6 - 22	1.0 - 2.5	60 - 50
B - F1 S	25	10 - 26	1.0 - 2.5	80 - 70
B - F1 S	40	15 - 30	1.0 - 2.5	90 - 70
B - F1 S	50	22 - 40	1.0 - 2.5	95 - 70

Engineering and Performance Data

- V_f** : Recommended Velocity of air at the filter face
 P_d : Pressure Drop across the Filter
%E : Percentage of filter efficiency



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Synthetic Filters - BF2

BF21 - Plain Filter; BF22 - Wire meshed Filter;

BETEC manufactures synthetic filters with a medium made of non-woven cotton, plus polyester which has been specially manufactured for high dust holding air filtration with minimum efficiency rating.

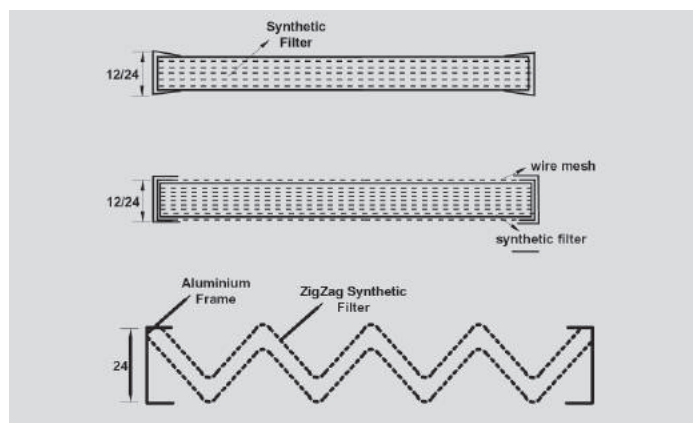
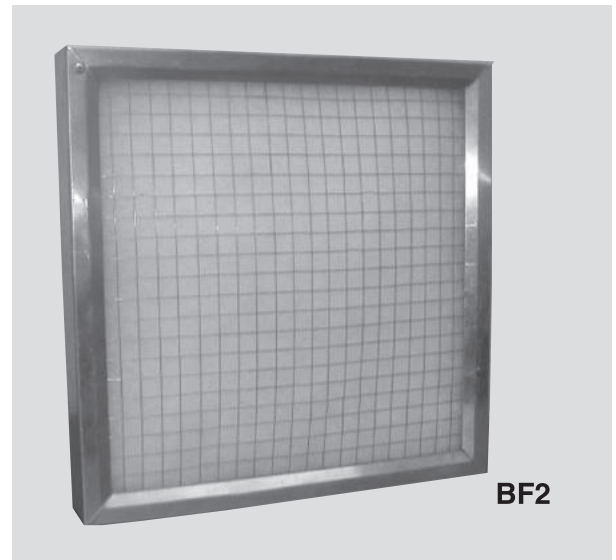
BETEC BF2 Series Synthetic Filters

A* – Aluminum Frame; **S** – Stainless Steel Frame;
G – Galvanized Frame

BF2 Series Standard Construction Aluminum*

The filters come in an enclosing frame constructed of rigid, water resistant, heavy-duty board. The inner surface of the frame shall be bind to the filter pack to eliminate air bypass. The filter media is of different materials such as non-woven polyester, non-woven cotton plus polyester, fiberglass. Media is aerodynamically pleated and is encased in a one-piece moisture resistant, heavy-duty beverage board frame. Strong adhesive bonds diagonally support members to pleats to ensure proper pleat spacing for even dust loading. This quality construction creates a rugged durable filter that will be intact during installation and operation under normal conditions.

- c In the case of fiberglass media the high tensile strength of the glass wire support system assures trouble free operation.
- c In the case of Polyester the medium is made of polyester fibers progressively bonded together with a fire retardant resin. The fibers have a degree of elasticity; the media is highly resistant to abrasion or fragmentation.
- c Controlled pleat spacing and alignment assures uniform airflow throughout the filter.
- c In the case of Nylon medium pockets are constructed with thermoplastic sealed nylon thread stitching. The pockets are contoured to assure proper airflow and dust loading.



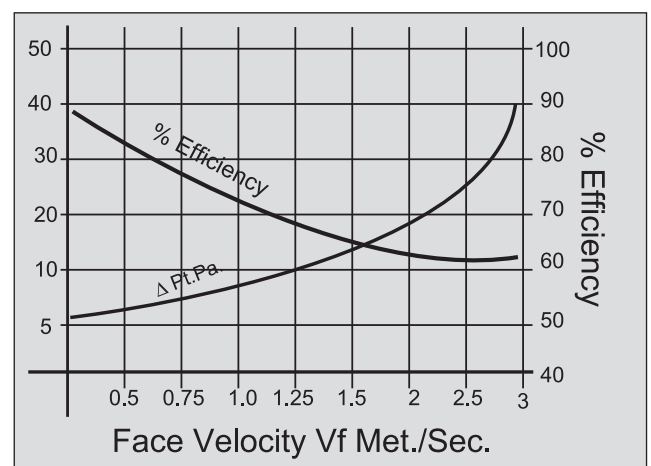
Model	Media Δ Thick (mm)	Pd Δ Pt (Pa)	Velocity V_f	Efficiency %
B - F21/22	12	6 - 20	1.0 - 2.5	60 - 50
B - F21/22	25	10 - 25	1.0 - 2.5	80 - 70
B - F21/22	40	15 - 35	1.0 - 2.5	90 - 75
B - F21/22	50	22 - 40	1.0 - 2.5	95 - 70
B - F23	12	6 - 22	1.0 - 2.5	60 - 50
B - F23	25	10 - 26	1.0 - 2.5	80 - 70
B - F23	40	15 - 30	1.0 - 2.5	90 - 70
B - F23	50	22 - 40	1.0 - 2.5	95 - 70

Engineering and Performance Data

V_f : Recommended Velocity of air at the filter face

P_d : Pressure Drop across the Filter

%E : Percentage of filter efficiency



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Bag Filters - BF3

BF31A – Bag Type Filter; BF32 – Rigid Box Type Filter; BF33 – Cartridge Type Filter

BETEC manufacture bag filters, which are effective filters and are specially for applications in centralized air-conditioning systems for separating fine dust where arduous operating conditions are exist.

BETEC BF3 Series Bag Filters

A* – Aluminum Frame; **S** – Stainless Steel Frame; **G** – Galvanized Frame

BF3 Series Standard Construction Aluminum*

Strong ducted case in galvanized sheet steel with standard cell frames is used for mounting bag filters. The filter medium is from high quality chemical fiber or glass fiber for separation of fine dust down to aerosols. The bag filters are fixed in to the casing by means of standard cell frames complete with perimeter sealing strips and quick release clamps. This system ensures accurate sealing between the frame and the bag.



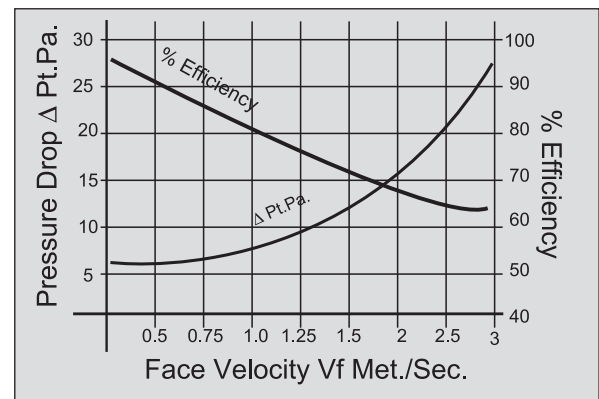
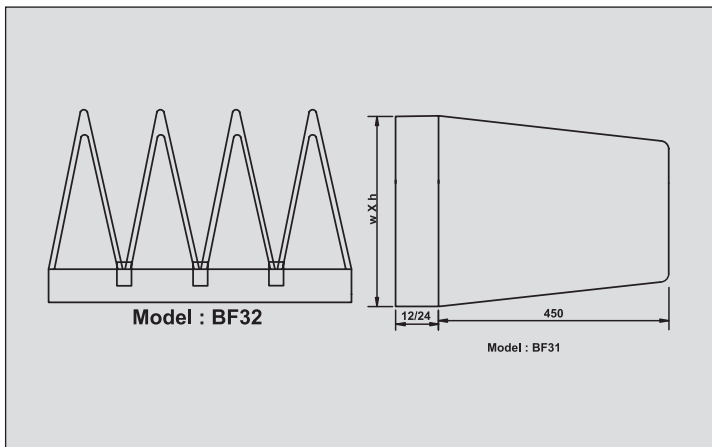
BF3

- c The material used, manufacture and finish of the bag filters provide good distribution of air, good corrosion resistance.
- c Small installation depth, no additional support is required for filter bags.
- c Filters with standard cell frames and special installation frame with steel strip supports provides significant advantages for project planning, assembly and servicing.
- c Bag filter inserts with an even longer service life.
- c Bag filters ensure guarantees high degree of operational safety in use, even under extreme conditions

Filter Media Area

Total Area: No. of Pockets X 2 X Pocket Width X Pocket Depth / 144

Engineering and Performance Data



Model	Media Thick (mm)	Pd Δ Pt (Pa)	Velocity Vf	Efficiency %
B - F31A	12	15 - 25	1.0 - 2.5	92 - 60
B - F31A	25	22 - 35	1.0 - 2.5	95- 70
B - F32	12	15 - 25	1.0 - 2.5	92 - 60
B - F32	25	22 - 35	1.0 - 2.5	95- 70
B - F33	12	15 - 25	1.0 - 2.5	92 - 60
B - F33	25	22 - 35	1.0 - 2.5	95- 70

Vf : Velocity of air at the filter face
Pd : Pressure Drop across the Filter
%E : Percentage of filter efficiency

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Carbon Filters - BF4

BF41 – Grill type Filter; BF42 – Parallel Type Filter; BF43 – Zigzag Type Filter

BETEC manufactures carbon filters for use in air-conditioning and ventilation systems for the removal of odorous gases and harmful vapours from existing conditioned air zone.

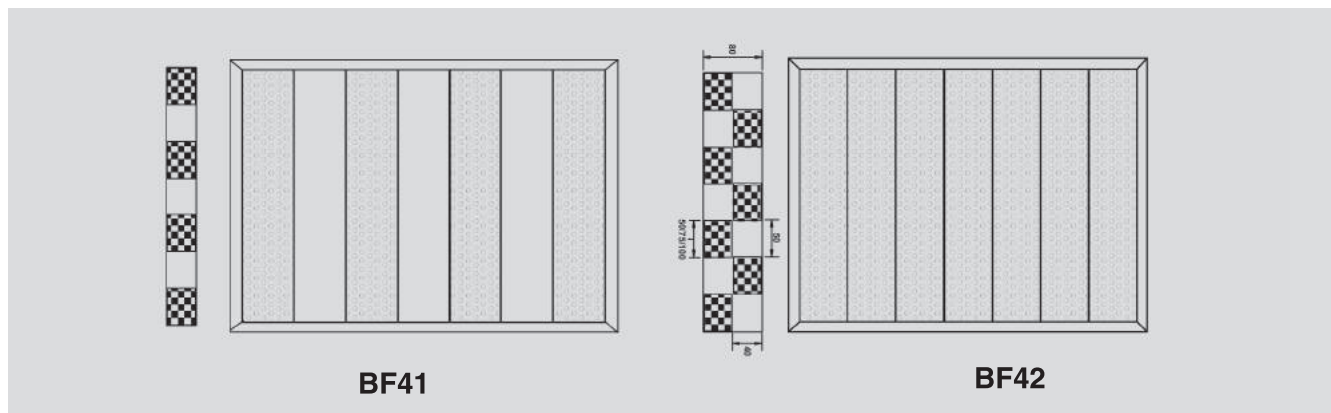
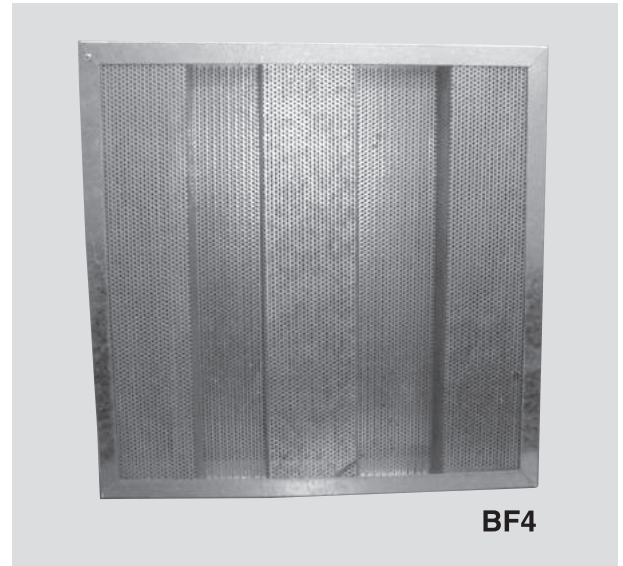
BETEC BF4 Series Carbon Filters:

A* – Aluminum Frame; **S** – Stainless Steel Frame;
G – Galvanized Frame

BF4 Series Standard Construction Aluminum*

These filters are enclosed in a strong galvanized steel frame casing with internal perforated galvanized steel splitters for mounting filter cells. The casing can be supplied to match specific dimensions. The filter media is impregnated moisture-resistant board with activated carbon cells in a securely fixed wedge shaped arrangement.

- c Activated carbon filter material is treated with an anti-microbial treatment to inhibit the growth of germs, bacteria, and mold fungi on the filter.
- c Neoprene used for sealing the carbon cells, which prevents air bypass in the filter rack.
- c The wedge shape arrangement gives additional support to the filter during transportation, installation and operation.
- c These filters are available in specified dimensions to meet the requirements.



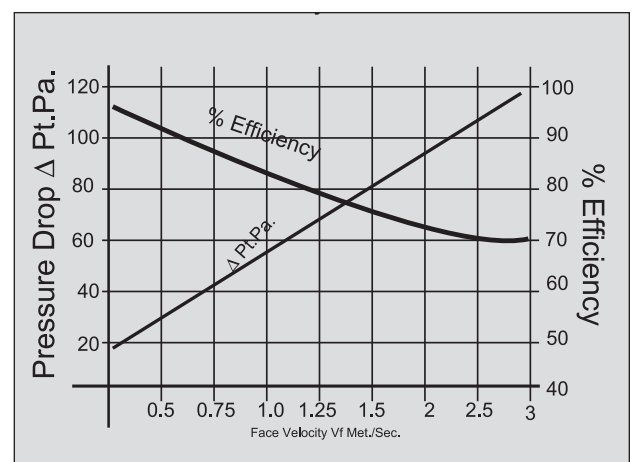
Engineering and Performance Data

V_f : Recommended Velocity of air at the filter face

Pd : Pressure Drop across the Filter

%E : Percentage of filter efficiency

Model	Media Thick (mm)	Pd ΔPt (Pa)	Velocity V _f	Efficiency %
B - F41	20	20	1.0 - 2.5	70
B - F41	30	35	1.0 - 2.5	75
B - F41	40	45	1.0 - 2.5	80
B - F41	50	60	1.0 - 2.5	85
B - F42	20	40	1.0 - 2.5	85
B - F42	30	60	1.0 - 2.5	90
B - F42	40	75	1.0 - 2.5	92
B - F42	50	90	1.0 - 2.5	95



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H.E.P.A. Filters - BF5

BF51 – Standard Type Filter; BF52 – Mini pleat Type Filter

BETEC manufactures **H.E.P.A.** High Efficiency Particulate Air filters for use in air-conditioning and ventilation systems where high efficiency up to 99.9% micro fine particles air filtration is required from the existing conditioned air zone.

BF5 Filters are high efficiency filters. They are tested and guaranteed to provide a minimum efficiency up to 99.9% on 0.3micron particles. They are completely sealed and gasketed in rigid box.

BETEC BF5 Series H.E.P.A Filters:

A* – Aluminum Frame; **S** – Stainless Steel Frame;
G – Galvanized Frame

BF5 Series Standard Construction Aluminum*

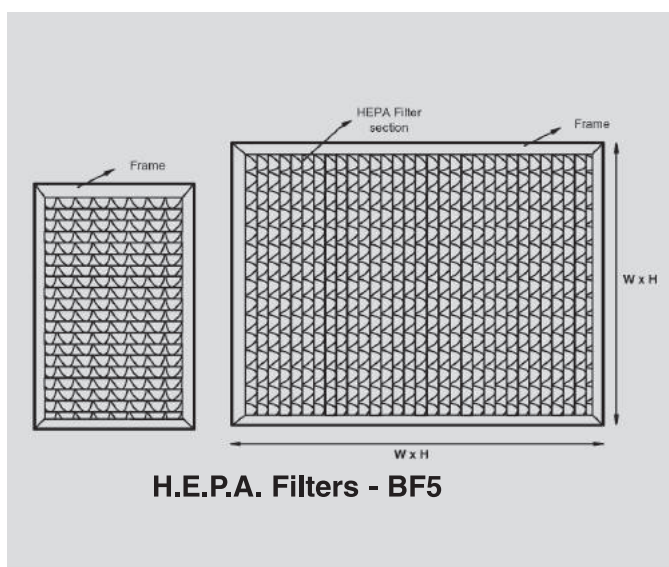
Media is micro fine glass paper closely spaced pleats with aluminum separators give superior rigidity and assure more surface area, lower velocity and longer life. Fire retardant sealants to secure the media pack in to the cell sides.



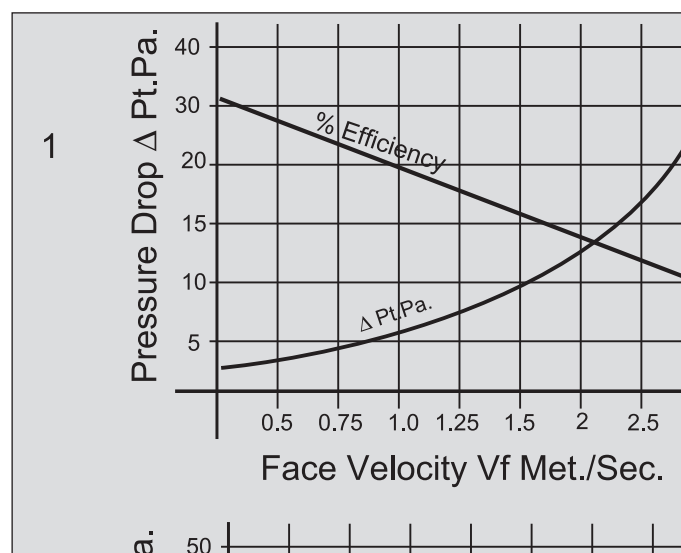
BF5

The frame construction is either aluminum, galvanized or stainless steel sheet.

Engineering and Performance Data



H.E.P.A. Filters - BF5



Model	Media Thick (mm)	Pd ΔPt (Pa)	Velocity V_f	Efficiency %
B - F51	100	150	0.5	99.0
B - F51	200	200	1.0	99.5
B - F51	300	250	1.25	99.7
B - F51	400	300	1.50	99.9
B - F52	100	100	0.5	99.5
B - F52	200	150	1.0	99.7
B - F52	300	200	1.25	99.9
B - F52	400	250	1.50	99.99

V_f : Recommended Velocity of air at the filter face
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