FH & FV Series Collectors

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FH & FV Series

Contaminants:
Primary:
Mist, Dust, Fume, Smoke and Gas/Vapors in individual or combined forms
Capture Approach: Ambient and Source Capture

Unit Mounting:
Horizontal or Vertical, ceiling hung, machine mounted, floor mounted or portable

Applications:
Machining, turning, grinding, boring, milling, forming, casting, cutting, mixing, molding, pouring, bonding, washing, welding soldering and a variety of other manufacturing and process applications.

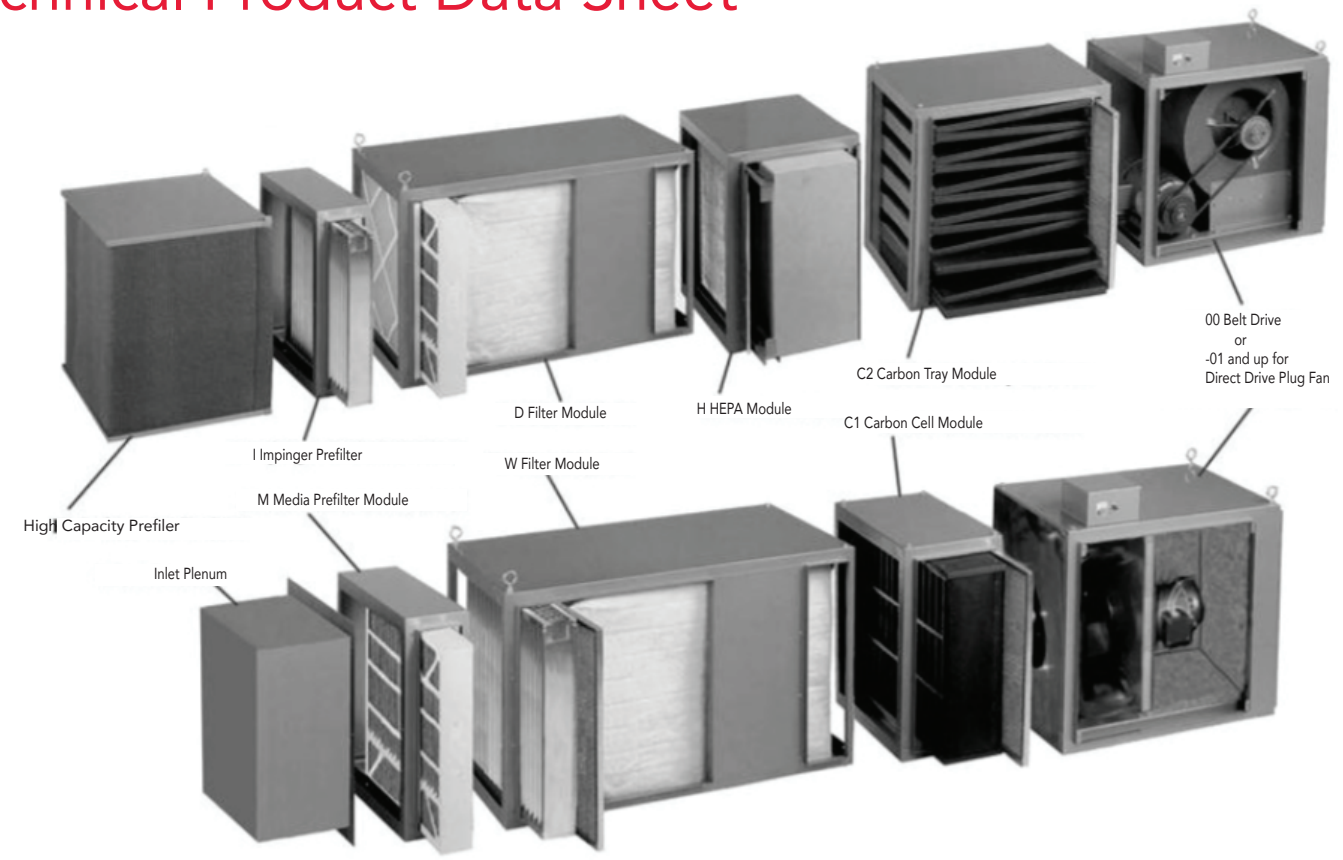
General Design, F Series Collectors:
Designed for flexibility the F Series line of Filter Media collectors provide cost effective and efficient control of an immense variety of contaminants such as mist, dust, fume, smoke and gas/vapor as individual or more complex combined forms. The most adaptable system we offer, systems feature modular designed filter stages that are easily customizable and are available with belt drive or, direct drive, backward inclined fan packages. Available in vertical (FV) or horizontal (FH) and a vertical compact caged "plug fan" (FP) mounting arrangements the F Series systems offer numerous mounting options (ceiling hung, machine, wall or floor mounted and portable units to name a few). A full line of accessories and options are available to easily customize and simplify unit design, application and installation. Using modular system design, units up to 45,000 CFM and larger are available.

FH & FV Series Collectors

AER Refurbished Systems FH & FV Series Filter Media Collection systems were originally developed as a source capture system to control light mist with heavy amounts of dust generated in a cast iron machining operation. Shortly afterward the design was altered slightly to allow them to be used as general, ambient mist and dust collection systems. The immense flexibility of the system led to a variety of additional filter and blower modules creating a system that could be easily adapted to vertical or horizontal mounting configurations with filter stages and blower packages that could be easily customized to suit the specific filtration and airflow requirements of the application at hand. Additionally, should contaminants change due to process changes, filter modules can be easily added and/or existing ones altered to adapt to the changing conditions. A full line of accessories and options are available to simplify system installation.

In addition to being a stand-alone product line, F Series filter modules can also be used as blowerless filtration units for numerous applications such compressor intake air filtration, HVAC systems and existing exhaust systems as well as prefilters or afterfilters to other collection systems.

Technical Product Data Sheet



The F Series modular design with numerous standard and special filter and blower arrangements as well as vertical or horizontal mounting provide the ultimate in system design flexibility.

Standard F Series units are configured for horizontal mounting (FH systems). Vertical units (FV systems) are available but may require additional unit modifications and additional costs dependent upon filter and blower modules used. One bank of filters is used on the 20 & 30 modules, two on the 60 and three on the 90. Larger systems are built from multiples of these modules up to 36,000 CFM. The F Series collection systems are assembled from combinations of the following modules depending on the particular model purchased.

M (4" Media) Module, 4" Multivee Filter, Disposable - Medium efficiency pleated filter (40 % ASHRAE 52.1 & 52.2 test methods) or other media.

I (4" Impinger) Module, Mist Impinger, Cleanable - For removal of mist droplets from the air stream.

M3 (4" x 3 Media) Module, can house 3, 4" deep filter stages or a variety of other arrangements of various medias up to 12" deep.

I3 (4" x 3 Impinger) Module, houses 3, 4" Mist Impingers - for heavy/severe mist, die cast lubes, grease, wax, sticky or thick contaminants.

D Module (3-stage horizontal dry filters)
a) 1" Prefilter, Disposable- Removes large particles and equalizes airflow across filters
b) 4" Multivee Air Filter, Disposable - Medium efficiency pleated filter (40-percent by ASHRAE 52.1 & 52.2 test methods)
c) Vee-Bag Air Filter, Disposable - A 95-percent efficiency collapsible borosilicate glass filter constructed in a series of V-shaped pockets providing a large amount of media surface area to allow high capacity loading. (Efficiency is based on ASHRAE 52.1 & 52.2 test methods). A 21" Vee Bag is used on the -20 module and 36" Vee Bag(s) on the 30 units and larger.

W Module (3-stage horizontal wet filters)
a) 4" Mist Impinger Cleanable - For removal of mist droplets from the air stream.
b) 1" Metal Mesh Air Filter, Cleanable - Medium efficiency
c) Vee Bag Air Filter, Disposable - A 95-percent efficiency collapsible borosilicate glass filter constructed in a series of V-shaped pockets providing alarge amount of media surface area to allow high capacity loading. (Efficiency is based on ASHRAE 52.1 & 52.2 test methods). A 21" Vee Bag is used on the -20 module and 36" Vee Bag(s) on the 30 units and larger.

H Module (2-stage)
a) 1" Prefilter, Disposable or Cleanable - Removes large particles and equalizes airflow across filters.
b) HEPA Filter, Disposable - High efficiency particulate air filters for smoke or toxic particulate capture. Filters have a guaranteed collection
efficiency of 99.97% at 0.3-micron range (based on the DOP test method).

C1 and C2 Modules (2-stage) There are two types for this module;
C1 Carbon Filter-fold module - Contains a 1/2 inch bed, total of 45-lbs per bank of activated carbon between two perforated metal walls which are formed into a continuous serpentine series of pleats. This configuration provides high air-handling capacity in small profile equipment. Alternate gas/vapor medias available.
C2 Carbon Filter Tray module - Houses 12 trays of AC carbon. Each tray is filled with a one-inch thick carbon bed. A total of 90-lbs of carbon is used per single filter bank (one bank in 20/30, two in the 60, three in the 90, etc.). Alternate gas/vapor medias available.
Postfilter, Disposable – C1 and C2 modules are provided with a 1" Pleated Multivee filter for removal of carbon dust particles that may be generated during operation.

B Blower Module
Two types of motor/blower combinations are available, adjustable RPM belt drive motor/blowers and direct drive backward inclined plug fans. Standard FV or FH blower modules house a belt-driven motor/blower combination with the motor prewired to an external electrical box with a power indicator light with optional direct drive blower packages are available. Standard FP system blower modules include direct drive motor/blower module (see FP Data Sheet)

Inlet Plenum (optional, for ducted, source capture systems)
Optional plenums are generally supplied as part of a ducted source capture system and provide equalization of airflow, prefiltration/drop out and easy hose or duct connection to the system.

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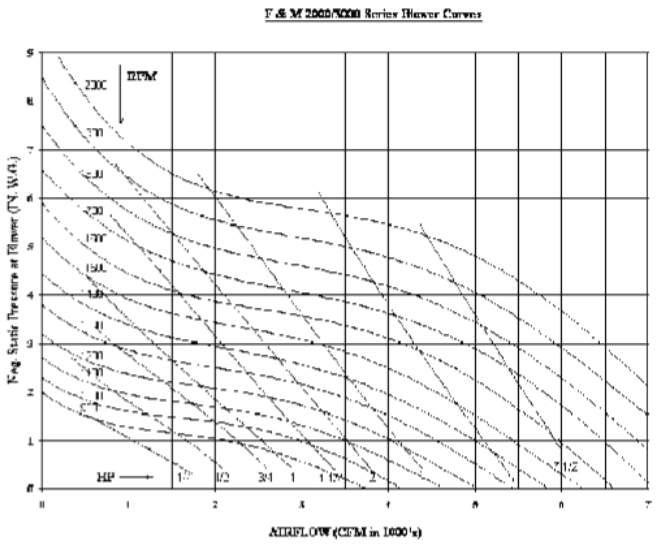

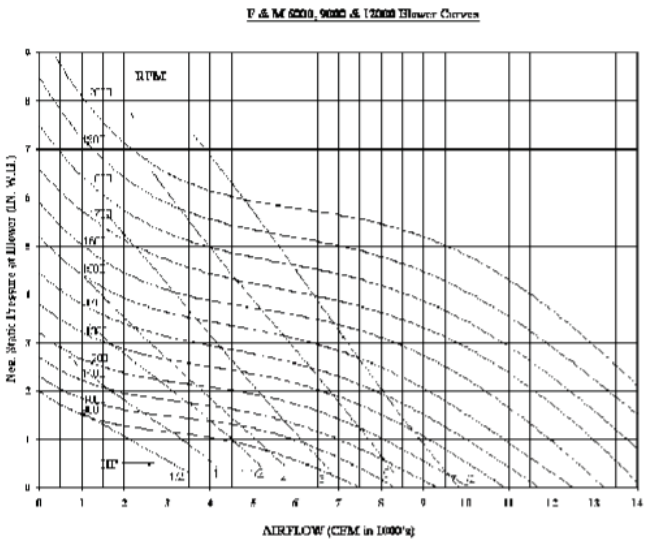

Features and Benefits

Modular Design
Modular design allows systems to be easily customized for the specific application filtration requirements. Additionally, systems can easily be changed or modified if contaminants change due to process or application changes.

Multiple Filter Modules Available
The large variety of modules available and the ability to easily customize filter stages give the F series collection systems unmatched design flexibility. Virtually hundreds of filter and blower combinations can be created by mixing, matching and modifying the various modules available. Additionally, filter modules without blower can be used for filtration on existing air systems.

Vertical or Horizontal Mounting
Can provide improved performance on certain applications and allows systems to fit into restricted space requirements available in some facilities.

Plenum
Large inlet plenum allows for installation of multiple duct drops to service multiple applications or machines. Plenums reduce inlet air velocity and distribute air for better utilization of filter media. In vertical applications they can be used as drop out boxes or settleing chambers for larger particles (clean out doors are available). Used in these applications the plenum reduces loading and maintenance on the filters. On vertical wet applications plenums include a large, leak resistant drain fitting (for drain hose kit, drain bottle or hard piping).

Multiple Access Doors & Panels
Multiple hinged access doors with ergonomic, easy to use compression latches provide quick, easy access to filters or components. Hinged doors are provided on filter modules that need routine access and prevent damage or injury from tripping over or falling removable panels. Multiple access panels are provided for quick easy access to non routine blower module components.

Flexible Design
Optimum flexibility is provided by the adaptable, filter track arrangement that allows for a variety of standard or custom filter configurations now or later in the field if processes and contaminants generated change.

Positive filter bag support
Heavy gage support rods reduce damage and provide positive support for loaded filters preventing collapse of the filter bags. This allows for full utilization of filter media and ensures optimum filter performance and filter life.

High performance belt drive blower
Standard units are equipped with high performance, belt drive blowers with adjustable sheave allowing fan RPM and performance to be tailored to the individual application requirements. Aerospace gaskets are provided at the blower exhaust to seal it against the blower outlet plate reducing vibration, entrainment and air leakage into the blower cabinet. Sealing the blower outlet also improves capture efficiency, provides higher performance at the inlet to the collector and lowers the unit operating costs.

Custom direct drive and belt drive blowers
Custom engineered, direct drive and belt drive motor and blower packages designed to meet special or specific, airflow, pressure or service/location requirements are available upon request.

Magnehelic Gage
Standard units include a Magnehelic gage with a range of 0 to 5" W.G. for monitoring filter life and determining when filter replacement or cleaning is required.

Custom Filter Stages
In addition to the standard filter arrangements, the tremendous flexibility of these systems allows for easy customization of the filters to meet the exact needs of the application. A large
variety of custom, filters are available to meet unique system requirements.