

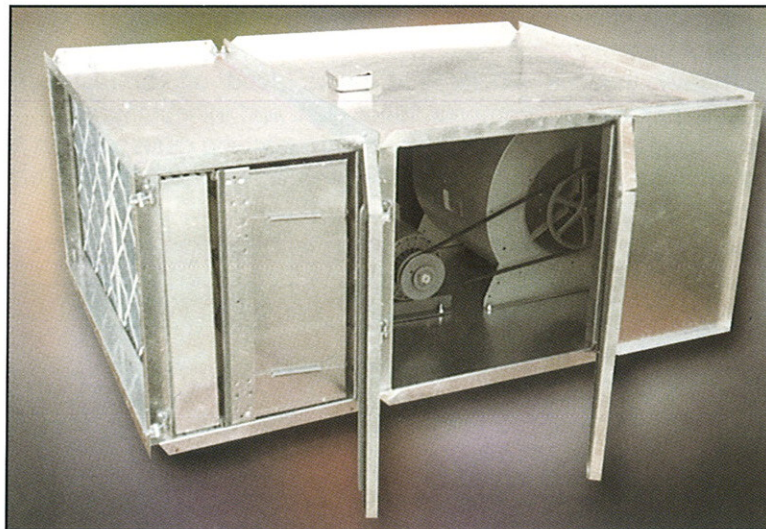


FILTER-MATE®

AIR CLEANING SYSTEMS AND EQUIPMENT ...
THE SOLUTION TO YOUR CLEAN AIR REQUIREMENTS

Bulletin No. 1400

MODULAR AIR HANDLING EQUIPMENT MODULAR SIDE ACCESS FILTER HOUSINGS

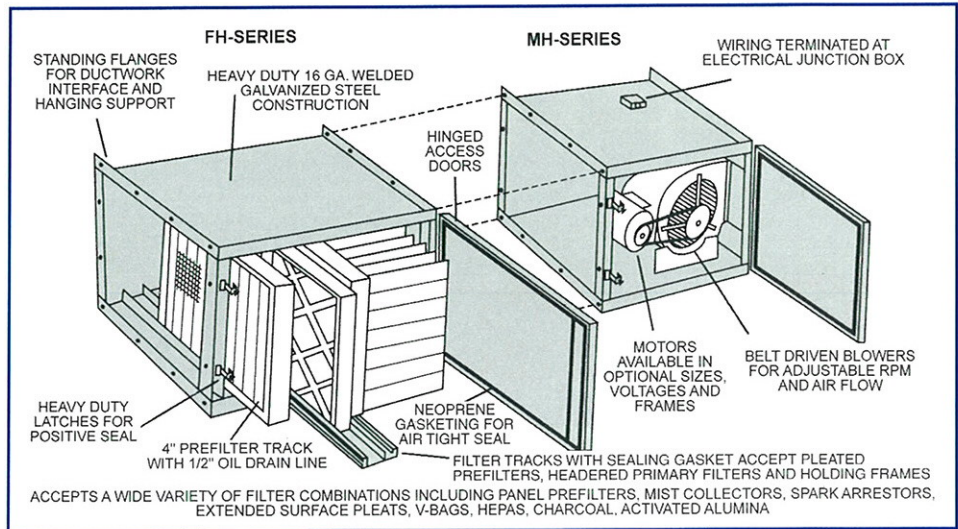
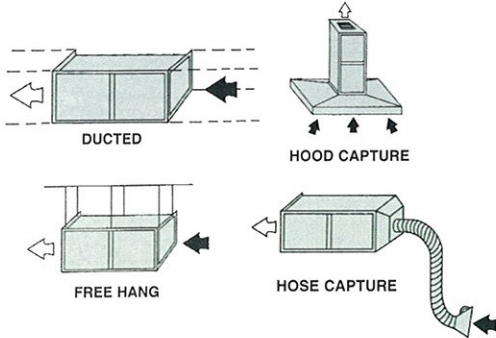


THE COMPETITIVE EDGE – FILTER-MATE® HAS IT ALL. HERE'S WHY ...

- **Eliminates** "in the room" air cleaners which are unsightly, expensive, noisy and take up valuable space. Our units work above the ceiling in either the existing ch&a ductwork system, or an easily installed independent flex duct system.
- Modular filter housings and motor-blower housings are **separate**. They can easily be connected to form one unit or placed in separate locations connected by a duct line.
- **Modular** motor-blower housing assemblies offset the additional pressure drop created by the filter bank and maintains the original balanced flow of the HVAC system.
- Side loaded filter housings accept up to **five** stages of progressive density filtration for efficient filter application. Filter choices include: panel prefilters, mist collectors, spark arrestors, extended surface pleats, V-bags, HEPAS, partial bypass or solid bed panels containing up to 90 pounds of activated charcoal or activated alumina. Multiple height-width filter housings are available.
- The ability for you to select a "filter-motor-blower" combination provides for **unlimited versatility**.
- **Motor-blower housings** accept motors of any frame and size and blowers from 100 to 18,000 cfm.
- Our **technical** and **engineering support** helps you select the correct filter-motor-blower combination for your particular application.

FILTER-MATE® ... BUILT TO LAST

- Modular
- Compact
- U.L. Listed Electrical Components
- Rugged Construction
- Fully Sealed
- Easy Installation
- Quiet Operation
- Easy To Service
- Non Electrostatic
- Energy Efficient
- Side Access
- Removes Particulates
- Removes Odors



APPLICATIONS:

- HOSPITAL & LAB:** Remove infectious bioaerosols and microbes in waiting rooms, laboratories, isolation rooms, offices, and cafeteria areas.
- COMMERCIAL:** Removes heavy tobacco smoke and odors, food odors, restroom odors, construction dust, formaldehyde, paper dust, ammonia, toner dust, and exhaust fumes
- INDUSTRIAL:** Removes welding and soldering fumes, airborne grinding dusts, airborne lint and fibers, odors, vapors, gasses, coolant and oil mists, smoke, cotton dust, asbestos, rubber and plastic curing and forming fumes

HOW TO SPECIFY DESIGN & CONSTRUCTION

The MH-series shall be a side access air handling system consisting of a housing with positively sealed, hinged access door(s), motor and belt drive at blower. Cabinet is made of 16 gauge welded galvanized steel with 1 1/2" standing flanges and 2 channel corner posts designed to interface with FH-series filter housings and ductwork. Electrical wiring is terminated at an externally mounted junction box. Drive section consists of adjustable pitch sheave, solid case iron sheave, and heavy duty V-belt. Motor mount is adjustable for controlling belt tension. Motor, blower size, and electrical requirements vary according to model.

The FH-series shall be a side access with multi-stage filter system consisting of a housing, access door(s), tracks and universal holding frames. Housing shall accept filter combinations listed under specifications. The cabinet consists of 16 gauge welded galvanized steel with 1 1/2" standing flanges and 2 channel corner posts, designed to interface with MH-series motor-blower housings and ductwork. Access doors are 16 gauge galvanized steel with replaceable positive sealing latches and replaceable hinges. Access doors and filter compartment is gasketed for air tight seal. Flanges are notched for water runoff and cabinets are suitable for outdoor installation. All metal joints are silicone sealed.

APPLICATION

The MH-series air handlers are used to push or draw air through FH-series filter housings. The air handler system and filter housing can be used separately or together with or without ductwork to provide a high efficiency air cleaning system capable of accepting a wide variety of high efficiency media filtration. Filter media types would include prefilters, pleated cartridges, V-bags, HEPAS, activated charcoal and activated alumina, mist collectors and spark arrestors. In a commercial application this system is designed to operate as an independently concealed system above the ceiling. It can either operate separate and independent of the central heat and air system or in conjunction with an existing system. In an industrial application this system can also be used in a free hanging position for general air circulation. It can be attached to one or more pick up hoses for direct source capture or attached to a canopy hood for general source capture in welding, grinding, cutting and boring operations.

SUGGESTED HOUSING ARRANGEMENTS

| APPLICATION | AIR FLOW |
|-------------|-----------------------------------------------------------------------------|
| HOSPITAL | Prefilter → 95% ASHRAE → Motor/Blower # → 99% HEPA |
| COMMERCIAL | Prefilter → 95% ASHRAE or 95% HEPA → Motor/Blower # → Charcoal → 40% ASHRAE |
| INDUSTRIAL | Prefilter → 55-95% ASHRAE → 95 HEPA → Charcoal → Motor/Blower |
| OIL MIST | Mist Collector → Prefilter → 95% ASHRAE → Motor/Blower |

*Certain stages may be deleted or added depending on the specific application.
 #Diffuser location if motor housing interfaces directly with downstream filter.

FILTER-MATE® Filter Housing Assembly SPECIFICATIONS

| MODEL | DIMENSION H x W x D (inches) Add 3" to Cabinet Width for Doors | SHPG. WEIGHT (lbs.) | C.F.M. at 500 F.P.M. face velocity | SERV. CLR. (inches) | FILTER STAGES* | QUANTITY & FILTER FACE DIMENSION (inches) Nominal | FILTER COMBINATIONS AVAILABLE** |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FH-14 - ½ x 1 FH-14 - 1 x 1 FH-14 - 1 x 2 FH-14 - 1 x 3 FH-14 - 2 x 2 FH-14 - 2 x 3 FH-14 - 3 x 3 | 15.25 x 24 x 14 27.25 x 24 x 14 27.25 x 48 x 14 27.25 x 72 x 14 51.50 x 48 x 14 51.50 x 72 x 14 75.75 x 72 x 14 | 32 43 65 80 100 131 175 | 500 1000 2000 3000 4000 6000 9000 | 26" 26" 26" 26" 26" 26" 26" | two two two two two two two | 1 - 12 x 24 1 - 24 x 24 2 - 24 x 24 3 - 24 x 24 4 - 24 x 24 6 - 24 x 24 9 - 24 x 24 | 2" prefilter + 6" pleated ASHRAE or charcoal |
| FH-21 - ½ x 1 FH-21 - 1 x 1 FH-21 - 1 x 2 FH-21 - 1 x 3 FH-21 - 2 x 2 FH-21 - 2 x 3 FH-21 - 3 x 3 | 15.25 x 24 x 21 27.25 x 24 x 21 27.25 x 48 x 21 27.25 x 72 x 21 51.50 x 48 x 21 51.50 x 72 x 21 75.75 x 72 x 21 | 92 120 173 232 254 332 430 | 1000 2000 4000 6000 8000 12000 18000 | 26" 26" 26" 26" 26" 26" 26" | two two two two two two two | 1 - 12 x 24 1 - 24 x 24 2 - 24 x 24 3 - 24 x 24 4 - 24 x 24 6 - 24 x 24 9 - 24 x 24 | 2" prefilter + 12" pleated ASHRAE or charcoal |
| FH-27 - ½ x 1 FH-27 - 1 x 1 FH-27 - 1 x 2 FH-27 - 1 x 3 FH-27 - 2 x 2 FH-27 - 2 x 3 FH-27 - 3 x 3 | 16.5 x 26.38 x 27 28.5 x 26.38 x 27 28.5 x 52.00 x 27 28.5 x 76.50 x 27 52.5 x 52.00 x 27 52.5 x 77.63 x 27 76.5 x 77.63 x 27 | 152 170 242 311 340 418 519 | 1000 2000 4000 6000 8000 12000 18000 | 26" 26" 26" 26" 26" 26" 26" | two two two two two two two | 1 - 12 x 24 1 - 24 x 24 2 - 24 x 24 3 - 24 x 24 4 - 24 x 24 6 - 24 x 24 9 - 24 x 24 | 2" or 4" prefilter + 12" HEPA 99.97 D.O.P. standard or high capacity |
| FH-33 - ½ x 1 FH-33 - 1 x 1 FH-33 - 1 x 2 FH-33 - 1 x 3 FH-33 - 2 x 2 FH-33 - 2 x 3 FH-33 - 3 x 3 | 15.25 x 24 x 33.75 27.25 x 24 x 33.75 27.25 x 48 x 33.75 27.25 x 72 x 33.75 51.50 x 48 x 33.75 51.50 x 72 x 33.75 75.75 x 72 x 33.75 | 120 155 224 300 328 429 556 | 1000 2000 4000 6000 8000 12000 18000 | 33" 33" 33" 33" 33" 33" 33" | three three three three three three three | 1 - 12 x 24 1 - 24 x 24 2 - 24 x 24 3 - 24 x 24 4 - 24 x 24 6 - 24 x 24 9 - 24 x 24 | 2" or 4" prefilter + 12" pleated ASHRAE + 8" solid bed charcoal OR 4" oil coalescer or spark arrestor + 2" prefilter + 12" pleated ASHRAE OR 4" oil coalescer or spark arrestor + 2" prefilter + 24" V-bag |
| FH-42 - ½ x 1 FH-42 - 1 x 1 FH-42 - 1 x 2 FH-42 - 1 x 3 FH-42 - 2 x 2 FH-42 - 2 x 3 FH-42 - 3 x 3 | 15.25 x 24 x 42 27.25 x 24 x 42 27.25 x 48 x 42 27.25 x 72 x 42 51.50 x 48 x 42 51.50 x 72 x 42 75.75 x 72 x 42 | 180 235 340 456 500 653 845 | 1000 2000 4000 6000 8000 12000 18000 | 36" 36" 36" 36" 36" 36" 36" | four four four four four four four | 1 - 12 x 24 1 - 24 x 24 2 - 24 x 24 3 - 24 x 24 4 - 24 x 24 6 - 24 x 24 9 - 24 x 24 | 2" prefilter + 6" pleated ASHRAE + 12" 95 D.O.P. HEPA style + 8" solid bed charcoal OR 2" prefilter + 36" V-bag |
| FH-33-CF - ½ x 1 FH-33-CF - 1 x 1 FH-33-CF - 1 x 2 FH-33-CF - 1 x 3 FH-33-CF - 2 x 2 FH-33-CF - 2 x 3 FH-33-CF - 3 x 3 | 15.25 x 24 x 33.75 27.25 x 24 x 33.75 27.25 x 48 x 33.75 27.25 x 72 x 33.75 51.50 x 48 x 33.75 51.50 x 72 x 33.75 75.75 x 72 x 33.75 | 200 330 527 800 920 1202 1550 | 1000 2000 4000 6000 8000 12000 18000 | 33" 33" 33" 33" 33" 33" 33" | two two two two two two two | 1 - 12 x 24 1 - 24 x 24 2 - 24 x 24 3 - 24 x 24 4 - 24 x 24 6 - 24 x 24 9 - 24 x 24 | 2" prefilter + 90 lbs. of virgin activated charcoal in 10 refillable trays per 24" x 24" face area - Activated Alumina Optional - |

*Available with or without filters

**Accepts holding frame or headered primary

HOW TO ORDER: State model, housing size, filter size, type, efficiency, and quantity.

Design and Specifications subject to change without notice.

FILTER-MATE® Motor-Blower Assembly SPECIFICATIONS

COMMERCIAL

| MODEL | DIMENSION H x W x D (inches) Add 3" To Cabinet Width For Doors | SHPG. WT. (lbs.) | dBA See Note * | MOTOR | BLOWER WHEEL Diam. x Width Forward Curved | C.F.M. @ TOTAL STATIC PRESSURE RPM, BHP |
|-----------------|-------------------------------------------------------------------------|------------------------|-------------------------|-------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------|
| MH-21 - 1/2 x 1 | 15.50 x 24 x 21 | 90 | 52 | 1/3 H.P., 115 V.A.C., F.L.A. 6.0, 1725 rpm, 60 Hz. | 7 x 5 | 600 cfm @ 1.3" TSP, 1800 rpm, BHP .27 |
| MH-23 - 1/2 x 1 | 15.50 x 24 x 23 | 93 | 49 | 1/3 H.P., 115 V.A.C., F.L.A. 6.0, 1725 rpm, 60 Hz. | 9 x 7 | 800 cfm @ 0.70" TSP, 850 rpm, BHP .16 |
| MH-33 - 1/2 x 1 | 15.50 x 24 x 23 | 103 | 60 | 1/2 H.P., 115 V.A.C., F.L.A. 8.0, 1725 rpm, 60 Hz. | 9 x 7 | 1000 cfm @ 1.5" TSP, 1257 rpm, BHP .43 |
| MH-23 - 1 x 1 | 27.25 x 24 x 23 | 127 | 55 | 3/4 H.P., 115/230 V.A.C., F.L.A. 11.4/5.7, 1725 rpm, 60 Hz. | 10 x 10 | 2000 cfm @ 1.0" TSP, 950 rpm, BHP 0.70 |
| MH-33 - 1 x 1 | 27.25 x 24 x 33.75 | 200 | 59 | 2.0 H.P., 230/460 V.A.C., F.L.A. 6.0/3.0, 1725 rpm, 60 Hz. 3 Phase | 12 x 12 | 2500 cfm @ 1.80" TSP, 1106 rpm, BHP 1.23 |
| MH-42 - 1 x 2 | 27.25 x 48 x 42 | 300 | 67 | 3.0 H.P., 230/460 V.A.C., F.L.A. 8.4/4.2, 1725 rpm, 60 Hz. 3 Phase | 15 x 15 | 5000 cfm @ 1.80" TSP, 912 rpm, BHP 2.90 |
| MH-42 - 1 x 3 | 27.25 x 48 x 42 | 400 | 68 | 5.0 H.P., 230/460 V.A.C., F.L.A. 13.0/6.5, 1725 rpm, 60 Hz., 3 Phase | 15 x 15 | 6000 cfm @ 1.80" TSP, 933 rpm, BHP 4.05 |
| MH-50 - 2 x 2 | 51.50 x 48 x 50 | 450 | 55 | 5.0 H.P., 230/460 V.A.C., F.L.A. 13.0/6.5, 1725 rpm, 60 Hz. 3 Phase | 18 x 18 | 8000 cfm @ 1.80" TSP, 750 rpm, BHP 4.35 |
| MH-57 - 2 x 3 | 51.50 x 72 x 57 | 650 | 61 | 10 H.P., 230/460 V.A.C., F.L.A. 24.6/12.3, 1725 rpm, 60 Hz. 3 Phase | 20 x 20 | 12000 cfm @ 2.0" TSP, 755 rpm, BHP 7.90 |
| MH-57 - 3 x 3 | 75.75 x 72 x 57 | 750 | 68 | 15 H.P., 230/460 V.A.C., F.L.A. 38.0/19.0, 1725 rpm, 60 Hz. 3 Phase | 22 x 22 | 18000 cfm @ 2.0" TSP, 754 rpm, BHP 14.30 |

INDUSTRIAL

| MODEL | DIMENSION H x W x D (inches) Add 3" To Cabinet Width For Doors | SHPG. WT. (lbs.) | dBA See Note * | MOTOR | BLOWER WHEEL Diameter Backward Inclined | C.F.M. @ TOTAL STATIC PRESSURE RPM, BHP |
|--------------------|-------------------------------------------------------------------------|------------------------|-------------------------|--------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------|
| MH-33 - 1 X 1 - BI | 28.0 X 24 X 33.75 | 400 | 62 | 3 H.P., 208-230/460 V.A.C., 3450 rpm, F.L.A. 8.3-7.6/3.8, 60 Hz., 3 Phase | 12" BI SWSI CLI | 2000 cfm up to 3.5" TSP, 2921 rpm, BHP 1.95 |
| MH-42 - 1 X 2 - BI | 28.0 X 48 X 42 | 500 | 69 | 5 H.P., 208-230/460 V.A.C., 3450 rpm, F.L.A. 14.0-13.0/6.5, 60 Hz., 3 Phase | 12" BI DWDI CLI | 4000 cfm up to 3.5" TSP, 2948 rpm, BHP 3.63 |
| MH-50 - 2 X 2 - BI | 51.5 X 48 X 50 | 650 | 72 | 10 H.P., 208-230/460 V.A.C., 1725 rpm, F.L.A. 27.2-24.6/12.30 | 16" BI DWDI CLI | 8000 cfm up to 3.5" TSP, 2289 rpm, BHP 7.6 |
| MH-57 - 2 X 3 - BI | 51.5 X 72 X 57 | 850 | 72 | 15 H.P., 208-230/460 V.A.C., 1725 rpm, F.L.A. 40.5-38.0/19.0 | 20" BI DWDI CLI | 12000 cfm up to 3.5" TSP, 1897 rpm, BHP 12.1 |
| MH-65 - 3 X 3 - BI | 75.75 X 72 X 65 | 1200 | 70 | 20 H.P., 208-230/460 V.A.C., 1725 rpm, F.L.A. 54-49/24.50 | 24" BI DWDI CLI | 18000 cfm up to 3.5" TSP, 1528 rpm, BHP 17.1 |

Higher C.F.M./HP/Static Pressure available upon request.

*Sound pressure level given in dBA is an approximate log weighted average with ducted inlet and ducted outlet @ 5 ft. using AMCA std. 301. For unducted systems, consult factory.

HOW TO ORDER: State model, housing size, motor specifications, blower specifications

Design and Specifications subject to change without notice.

OPTIONS:

- Internal vibration insulation
- Hanger rods with integral support
- Stainless or aluminum construction
- Double wall construction
- Acoustical or thermal insulation
- Transitions and silencers
- Exterior primer, enamel or epoxy coating
- 2 Way louvered exhaust grill



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