HEALTHY HOME
GUIDE

# Healthy Home System™

## IAQ PRODUCTS AND SOLUTIONS

FIELDCONTROLS

# *Ask about our other Reference Guides & Selling Tools*

## *Healthy Home iAQ App*

*The Ultimate Selling System for the Ultimate IAQ System!*

Available for Apple and Android smartphones and tablets, the Healthy Home iAQ app is a powerful, versatile new tool for the contractor.


## *Commercial Air Quality Guide*

Includes our comprehensive, state-of-the-art system, that is customizable and scalable for new and retrofit HVAC installations. Packaged modular solutions, customizable panels for virtually any commercial application.

## *Residential Ventilation Guide*

This guide will introduce you to our full line of ventilation options available to home builders and HVAC contractors. It provides reliable, practical, and proven ventilation that meets codes and satisfies homeowners' expectations for comfort, safety, and energy efficiency. It includes models, specifications, wiring diagrams, and much more.

## *Contractor Reference Guide*

For the latest in venting, combustion, and draft control, ask for the Field Contractor Reference Guide. Your guide for product information, specifications, installation, wiring, and replacement parts.

## *Healthy Hearth Guide*

A hearth needs to be healthy, too! For products that improve efficiency, save fuel, and add to the aesthetic value of your hearth, ask for the all new Healthy Hearth Guide.

FIELD CONTROLS

fieldcontrols.com

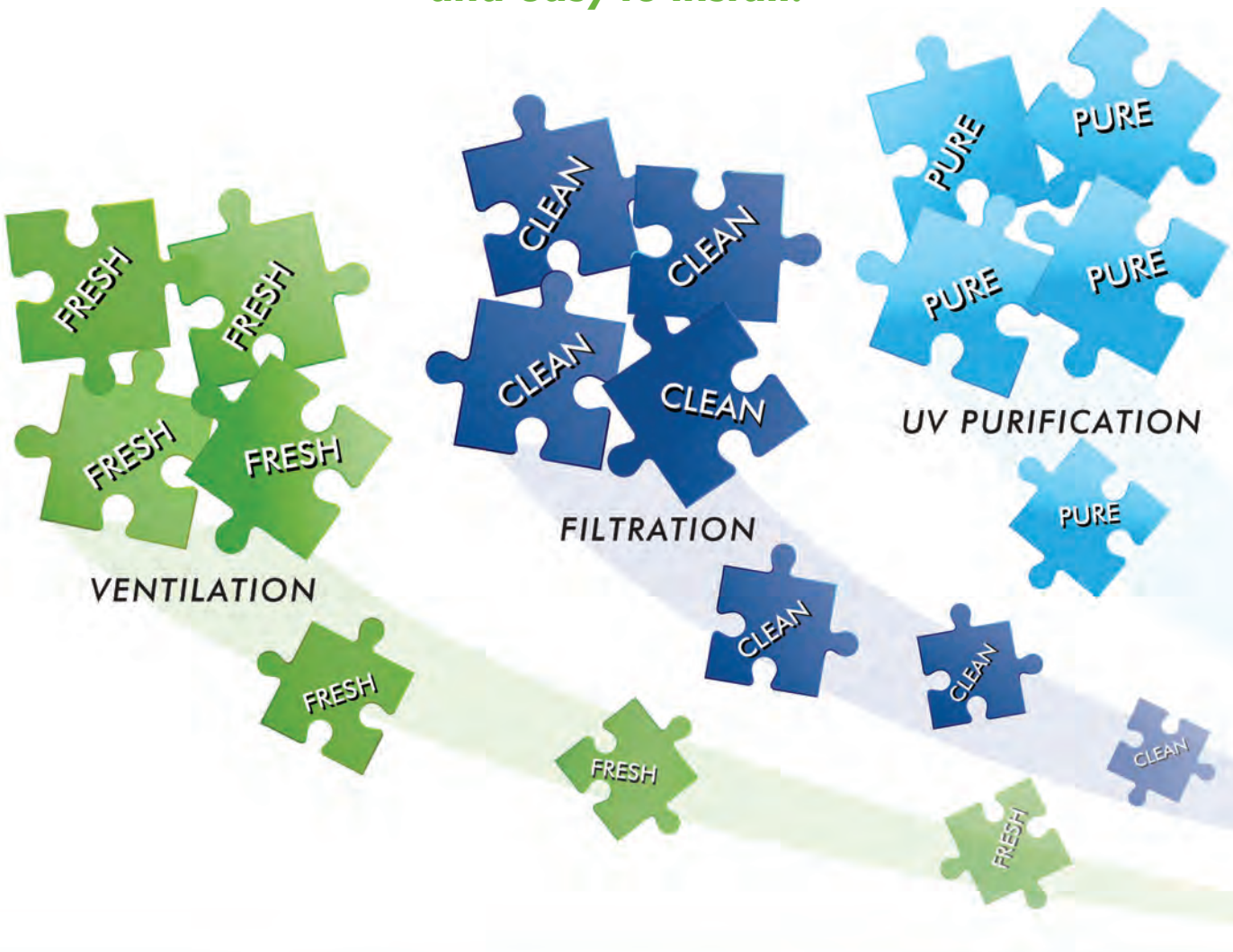
# Table of Contents

FIELD CONTROLS

Since 1927, our focus has been the control and movement of air. We lead the industry in the fields of indoor air quality, venting, combustion, and draft control. This is your guide for everything you need to keep your customer's air FRESH, CLEAN, and PURE.™ For specific installation manuals and more information, visit www.fieldcontrols.com.

Thank you for specifying Field Controls.

# There are **6,172** ways to *improve Indoor Air Quality* in this guide ***and ONE system*** that makes it ***easy*** *to understand, easy to sell, and easy to install.*



## Solving the Puzzle of Indoor Air Quality.

Everyone needs air that is FRESH, CLEAN, and PURE™. But every home is different and every region of the country is different. The Healthy Home System™ is the only indoor air quality system that is versatile enough to adapt to any home, any region, and any system.

We offer the most complete line of UV purification, filtration, and ventilation products on the market. The Healthy Home System Control brings all the components together. Our new Healthy Home iAQ App allows you to quote Good, Better, Best, and Premium options and customize the system to meet your customers' needs and budget.

## The Healthy Home iAQ App. The Ultimate Selling System.

This iAQ app is an excellent tool for you to educate your team and your customers about IAQ and the benefits of the Healthy Home System. You can use it to configure a custom system for each customer, show them options, quote prices, and present a proposal...all from the convenience of your Apple or Android device.

Healthy Home App

*Now with in-app Quoting and Proposals!*

INTRODUCTION

# Introducing the Healthy Home System™ from Field Controls.

Field Controls has developed the premier system that simply and inexpensively transforms the heating and cooling system in any home into a Healthy Home System. The Healthy Home System goes beyond traditional technology to ensure air that is FRESH, CLEAN, and PURE.™

Creating a custom Healthy Home System is easy. Start with a Healthy Home System Control and select the appropriate Fresh Air Damper, Media Air Cleaner™, and UV-Aire® model for your heating and cooling system.

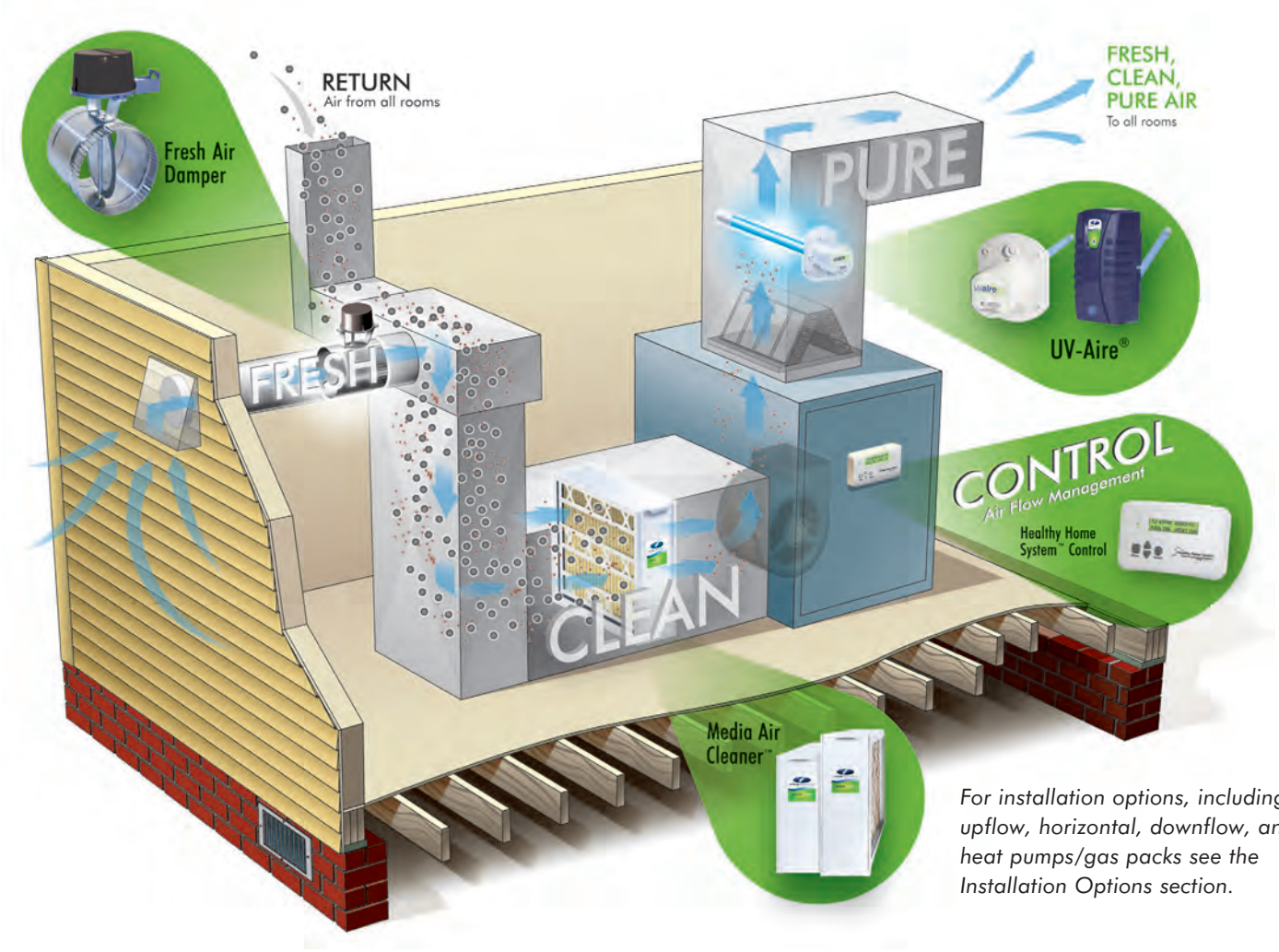
**FRESH**
Fresh Air Ventilation


Healthy Home System™ Control

**CLEAN**
Clean Air Filtration

**PURE**
UV-Aire® Purification

It's the **Control** that makes it a **System!**




*For installation options, including upflow, horizontal, downflow, and heat pumps/gas packs see the Installation Options section.*

# Healthy Home System™

FIELD CONTROLS

# Healthy Home iAQ App

INTRODUCTION

## The Ultimate Selling System

The Healthy Home iAQ app is a powerful, versatile new tool for the contractor and the homeowner.

Educate your team and your customers about IAQ and the benefits of the Healthy Home System. You can use it to configure a custom solution for each HVAC system, show options, quote prices, and present a proposal...all from the convenience of your Apple or Android device.


**Healthy Home App**

| Contractor Benefits | Features | Homeowner Benefits |
|---|---|---|
| Video tool that demonstrates the Healthy Home System™ | Healthy Home Demo | Explains the need for better air and the benefits of the Healthy Home System™ |
| Rates indoor air quality in home, shows benefits of Healthy Home System™ | Indoor Air Quality Scorecard | Rates indoor air quality in each home |
| Determines the recommended product(s) needed for each home | System Selector Tool | Recommends custom options for each home |
| Provides homeowner with direct contact info for future service calls | Contractor Info | Stores contractor information |
| Receive automatic notifications to replace filter and/or lamp | UV Lamp/Filter Alert | Monitors lamp and filter replacement, sends email reminders |
| Add logo and customize pricing for easy quotations | Custom Quoting | Displays pricing for good, better, best, and premium options. Allows customer to select and approve |
| All proposals are saved in the app so they can be easily located and managed by the contractor | NEW Proposal Database | Homeowner quote information is stored for future use |

# Healthy Home iAQ App

## iNTERACTIVE, iNTUITIVE, iNSTRUCTIVE

The app's homescreen provides local weather, air quality, lamp, and filter status.


*For iPads & Tablets*

**1 Healthy Home Demo**
Explains the need for FRESH, CLEAN, and PURE™ air and demonstrates how the Healthy Home System works.

**2 Indoor Air Quality Scorecard**
Helps the homeowner evaluate their need for a Healthy Home System.

**3 System Selection**
Allows the contractor to configure a custom system for each homeowner.

**4 System Quotation**
Allows the contractor to customize and instantly quote a system.

**5 UV Lamp/Filter Alerts**
Can automatically email the contractor when the lamp and/or filter needs to be replaced.

**6 Proposals**
Finalizes quotes and creates customized paperless proposals.

CONTROL

## For Ventilation and IAQ Control

It's the **Control** that makes it a **System!**

The Healthy Home System Control intelligently manages the central fan to provide fresh air ventilation and maximize the benefits of the Healthy Home System. This full featured control is now easier to install and set up, provides more options and better feedback. It's the easiest, most cost effective way to ensure the air in the home is FRESH, CLEAN, and PURE...even when not heating or cooling.


HHSC+

### *How It Works*

*Filters and air purifiers only work when the furnace or air conditioner is operating. The Healthy Home System Control monitors the central fan activity and engages the fan on a regular schedule to keep air that is FRESH, CLEAN, and PURE circulating throughout the entire home even during times when not heating and cooling. The Healthy Home System Control is set by the contractor and works independently of the thermostat, providing better control and more consistent operation.*

| CONTRACTOR Benefit | Features | HOMEOWNER Benefit |
|---|---|---|
| Utilizes central fan for supply ventilation | **Controls and monitors central fan** | Lower cost of installation and operation |
| Certifies damper operation to meet ASHRAE 62.2 | **Fresh Air Damper monitor and control** | Automatic fresh air ventilation |
| Filter timer/change reminder | **Filter monitor** | Filter timer/change reminder |
| UV lamp timer/change reminder | **UV lamp monitor** | UV lamp timer/change reminder |
| Current sensor detection (range hood, fireplace, laundry, bath fan) | **Auxiliary input** | Responds to call for additional fresh air from $CO_2$ sensor and other devices |
| 24 Volt output for second damper for balanced ventilation | **Auxiliary output** | Balanced ventilation |
| Easy to set up and customize | **Programmable clock/calendar** | User-friendly interface |
| Instant diagnostic feedback | **Diagnostic notification display** | Automatic status updates |
| Dewpoint/Enthalpy control | **E-Sensor™ accessory** | Increased comfort and improved energy efficiency |

Healthy Home System™

# CONTROL



## Fresh Air Ventilation

***Opens*** damper on a schedule that coincides with central fan operation for ***fresh air ventilation***.

## Media Air Filtration

***Circulates*** air on regular schedule to ***reduce dust, pollen, and dander.*** Includes filter change ***alert***.

## UVC Air Purification

***Circulates*** air on a regular schedule to ***neutralize and reduce mold, bacteria, viruses, and fungi.*** Includes lamp change ***alert***.

## Central Fan Control

***Monitors*** and ***engages*** the central system fan on a regular schedule to ***keep air circulating*** throughout the home.




# PLUS

## Auxiliary Output

Can ***activate*** auxiliary fans, such as ***bathroom and booster fans***, to exhaust stale air while bringing in fresh air for balanced ventilation.

## Auxiliary Input

Can ***engage*** fan and open fresh air damper to provide additional fresh air ventilation in response to ***$CO_2$ sensors, current sensors, dryers, gas fireplace logs, range hood fans, wall timers***, and other auxiliary devices.

## E-Sensor™ Accessory

Can ***prevent*** fresh air damper from opening when the ***E-Sensor™ enthalpy control*** detects that outside air is too hot, too cold, or too humid.

FRESH

## Fresh Air Ventilation. Who needs it?

We do. Every home needs fresh air, too. Efforts to make homes more energy efficient prevent fresh air from entering the home and can lead to compromised air quality and appliance inefficiency. Weather stripping, caulk, sealants, and moisture barriers such as Tyvek® tighten the home, reducing air changes and locking stale air inside. Plus, when a home can't breathe, laundry dryers, range hood fans, and bathroom fans take more time to do their jobs, wasting precious energy.

The lack of fresh air ventilation has become such a problem, HVAC engineers have developed a new standard (ASHRAE 62.2*) specifying the minimum air changes needed in any given residence. In many states, fresh air ventilation is required to meet building codes for new construction or to obtain energy tax credits in existing homes.

The Field Controls Fresh Air System™ meets these requirements by delivering fresh air automatically, year round.

### Ventilation Systems Comparison

| |  **Fresh Air System™** FAS-6 (CFIV**) |  **HRV/ERV** |  **Exhaust** (Bathroom & kitchen fan, clothes dryer) |
|---|---|---|---|
| **Cost to operate** | Low | Low | Low |
| **Cost to install** | Low | High | Low |
| **Source** | Known source of clean air | Known source of clean air | Uncontrolled source relies on leaks of contaminated air from crawl spaces, attics, garages, etc. |
| **Air distribution** | Tempered and treated air is distributed through the entire home | Balanced ventilation | Hot and cool untreated air is locally delivered |
| **Other** | Enhances filtration and UV systems | Controls moisture buildup | May cause house to go negative |

***Central Fan Integrated Ventilation*

*The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) has determined how much fresh air is needed to provide an acceptable level of indoor air quality, specified in ASHRAE Standard 62.2-2010, which states that we need to provide 7.5 cfm of fresh air per bedroom, plus the ability to get an additional 0.01 cfm of fresh air per square foot of floor area.

The Healthy Home System™ Control intelligently manages the central fan, allowing the Fresh Air Damper to provide **FRESH** air in the home all year round... even when not heating or cooling.



## Fresh Air Damper

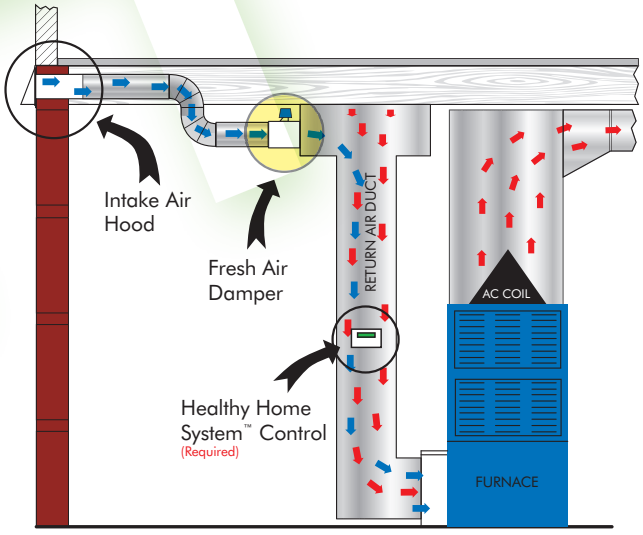
FAD – Fresh Air Damper
*Requires HHSC+ for activation*

### Features

- Durable, stainless steel construction
- Motorized
- Energy efficient operation
- Reliable, proven design
- Remains closed when fresh air is not needed

### *How It Works*

*The Fresh Air Damper (FAD) is a motor driven damper activated by the Healthy Home System Control. When there is a call for fresh air, the HHSC+ opens the damper allowing fresh air to enter the HVAC return. When the HHSC+ is satisfied, the damper is closed.*




## Make-Up Air Damper

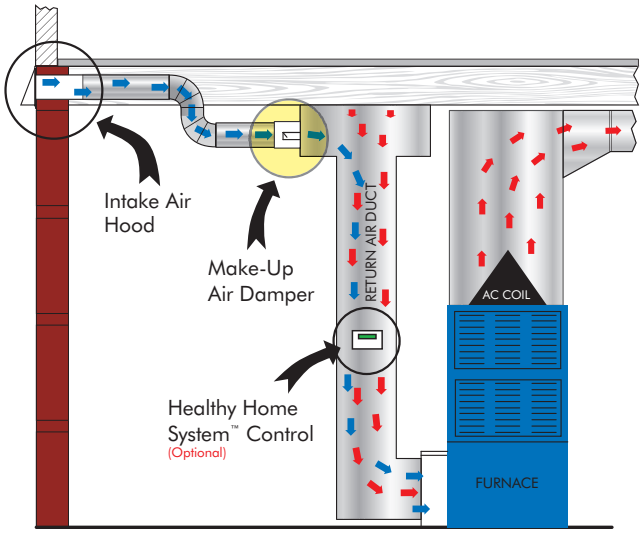
MAS – Make-Up Air Damper
*Functions with or without the HHSC+*

### Features

- Adjustable gate provides precise air flow control
- Pressure Activated
- Easy to read air flow gauge
- No electricity required
- 24 gauge aluminum coated steel
- Corrosion resistant and paintable
- Intake air hood included
- Quiet operation

### *How It Works*

*The Make-Up Air System (MAS) is a pressure activated damper that opens whenever the central fan is on. It closes automatically when the fan is turned off. The adjustable gate provides precise control of air flow based on the needs of the structure.*



# Fresh Air System™
## DAMPER SIZING

FRESH

## Whole House Ventilation

The Fresh Air System (FAS) meets ASHRAE 62.2 standards by delivering fresh air automatically and efficiently. The FAS includes proven components for simple, reliable, fresh air delivery for improved indoor air quality.


FAS – Fresh Air System

### Choosing the Right Vent Damper

**Step 1:** Use Table 1 to determine the CFM requirements for the home. To program the HHSC+ to ventilate 33% of the time, multiply by 3. To ventilate 50% of the time, multiply by 2.

**Step 2:** Measure static pressure at the return intake.

**Step 3:** Calculate equivalent feet of duct between the fresh air inlet and the central fan. Use Tables 2 and 3.

**Step 4:** Using Table 4, find static pressure column. Match the CFM rate equal to or greater than the CFM required under the appropriate duct type and length. The correct damper model is in the column to the left. When in doubt, use the next larger damper.

*Example:*

*(1) A three bedroom, 2,000 square feet house requires 150 CFM with a damper that is open twenty minutes every hour.*

*(2) Static pressure in the return is .05 wc.*

*(3) The system has 20 equivalent feet of smooth duct.*

*(4) The FC-8 Fresh Air Damper delivers 150 CFM in smooth duct at 30 equivalent feet and would be the appropriate damper for this system.*

**Table 1: ASHRAE CFM Requirements***

| | Bedrooms | | | | |
|---|---|---|---|---|---|
| Sq. Ft. | 1 | 2 | 3 | 4 | 5 |
| 1,000 | 25 | 32.5 | 40 | 47.5 | 55 |
| 1,500 | 30 | 37.5 | 45 | 52.5 | 60 |
| 2,000 | 35 | 42.5 | 50 | 57.5 | 65 |
| 2,500 | 40 | 47.5 | 55 | 62.5 | 70 |
| 3,000 | 45 | 52.5 | 60 | 67.5 | 75 |
| 3,500 | 50 | 57.5 | 65 | 72.5 | 80 |

**ASHRAE 62.2 Ventilation Standards assumes one person for each bedroom, plus one more. If the fan is engaged twenty minutes per hour, multiply this number by 3.*

**Table 2: Equivalent Feet for Vent Pipe Fitting**

| Vent Pipe Fittings | Vent Pipe Diameter | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3" | 4" | 5" | 6" | 7" | 8" | 9" | 10" | 12" | 14" |
| Tee | 19 | 25 | 31 | 38 | 44 | 50 | 56 | 63 | 75 | 89 |
| Y-Connection | 10 | 13 | 16 | 20 | 23 | 26 | 29 | 32 | 39 | 45 |
| 90° Elbow | 5 | 7 | 9 | 11 | 12 | 14 | 16 | 18 | 21 | 25 |
| 45° Elbow | 3 | 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 13 |

**Table 3: Equivalent Feet for a Reducer/Increaser**

| | | Small Pipe Size | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3" | 4" | 5" | 6" | 7" | 8" | 9" | 10" | 12" | 14" |
| Large Pipe Size | 3" | 0 | | | | | | | | | |
| | 4" | 2 | 0 | | | | | | | | |
| | 5" | 4 | 2 | 0 | | | | | | | |
| | 6" | 5 | 4 | 2 | 0 | | | | | | |
| | 7" | 6 | 5 | 4 | 1 | 0 | | | | | |
| | 8" | 7 | 7 | 6 | 3 | 2 | 0 | | | | |
| | 9" | 7 | 8 | 7 | 5 | 4 | 2 | 0 | | | |
| | 10" | 8 | 8 | 8 | 6 | 6 | 4 | 2 | 0 | | |
| | 12" | 8 | 10 | 10 | 8 | 9 | 8 | 6 | 4 | 0 | |
| | 14" | 9 | 10 | 12 | 10 | 12 | 11 | 9 | 8 | 3 | 0 |
| | 16" | 9 | 11 | 12 | 11 | 14 | 13 | 13 | 11 | 8 | 3 |
| | 18" | 9 | 11 | 13 | 12 | 15 | 15 | 15 | 14 | 11 | 7 |
| | 20" | 9 | 12 | 14 | 13 | 16 | 17 | 17 | 17 | 15 | 11 |

*To estimate the equivalent feet length of the Reducer/Increaser chart, find the figure at the intersection of the small pipe size and the large pipe size.*

## Calculating Equivalent Feet of a Fresh Air Intake System

### How to determine total equivalent feet

**Step 1:** Determine the total equivalent feet for each type of fitting used in the system from Tables 2 and 3.

**Step 2:** Calculate the total feet for the straight lengths of pipe.

**Step 3:** Add the equivalent feet of the fittings to the total amount of feet of straight length pipe. This will approximate the total equivalent feet of the fresh air intake system.

**Step 4:** Find your total equivalent feet in Table 1 to determine the proper model for your installation.

*Example: System Pipe Size= 6"*
*(1) 2-90° Elbows (6")= 22 Ft.*
*(2) 10-2 Ft. Lengths of 6" Pipe= 20 Ft.*
*(3) Total Equivalent Feet= 22 Ft. + 20 Ft. = 42 Ft.*

FRESH

### Table 4: Fresh Air Damper Sizing Chart

| Negative Return Air Static Pressure | | 0.025 | | 0.05 | | 0.1 | | 0.15 | | 0.2 | | 0.25 | | 0.3 | | 0.35 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Damper & Intake Hood | Equivalent Ft. of Duct Length | CFM | | | | | | | | | | | | | | | |
| | | Flex | Smooth | Flex | Smooth | Flex | Smooth | Flex | Smooth | Flex | Smooth | Flex | Smooth | Flex | Smooth | Flex | Smooth |
| FC-4 inch Fresh Air Damper 4" Intake Hood | 10 | 23 | 28 | 32 | 40 | 45 | 57 | 56 | 70 | 64 | 80 | 72 | 90 | 79 | 98 | 85 | 106 |
| | 30 | 19 | 23 | 26 | 33 | 37 | 47 | 46 | 57 | 53 | 66 | 59 | 74 | 65 | 81 | 70 | 88 |
| | 50 | 16 | 20 | 23 | 29 | 33 | 41 | 40 | 50 | 46 | 58 | 52 | 64 | 57 | 71 | 61 | 76 |
| FC-5 Inch Fresh Air Damper 6" Intake Hood | 10 | 38 | 48 | 54 | 67 | 76 | 95 | 94 | 117 | 108 | 135 | 121 | 151 | 132 | 165 | 142 | 178 |
| | 30 | 32 | 40 | 45 | 56 | 64 | 80 | 78 | 97 | 90 | 113 | 101 | 126 | 110 | 138 | 119 | 149 |
| | 50 | 28 | 35 | 39 | 49 | 56 | 70 | 68 | 85 | 79 | 99 | 88 | 110 | 97 | 121 | 104 | 130 |
| FC-6 inch Fresh Air Damper 6" Intake Hood | 10 | 51 | 64 | 72 | 90 | 102 | 128 | 126 | 157 | 145 | 181 | 162 | 202 | 177 | 221 | 191 | 239 |
| | 30 | 45 | 56 | 63 | 79 | 89 | 111 | 109 | 136 | 126 | 157 | 141 | 176 | 154 | 193 | 166 | 208 |
| | 50 | 40 | 50 | 57 | 71 | 80 | 100 | 98 | 122 | 113 | 141 | 126 | 158 | 138 | 173 | 150 | 187 |
| FC-7 inch Fresh Air Damper 8" Intake Hood | 10 | 87 | 109 | 123 | 154 | 174 | 218 | 213 | 266 | 246 | 308 | 275 | 344 | 301 | 377 | 326 | 407 |
| | 30 | 73 | 91 | 103 | 129 | 146 | 183 | 179 | 224 | 207 | 258 | 231 | 289 | 253 | 316 | 273 | 342 |
| | 50 | 64 | 80 | 91 | 113 | 128 | 160 | 157 | 196 | 181 | 227 | 203 | 254 | 222 | 278 | 240 | 300 |
| FC-8 inch Fresh Air Damper 8" Intake Hood | 10 | 98 | 123 | 139 | 174 | 197 | 246 | 241 | 301 | 278 | 348 | 311 | 389 | 341 | 426 | 368 | 460 |
| | 30 | 87 | 109 | 123 | 154 | 174 | 218 | 214 | 267 | 246 | 308 | 275 | 344 | 302 | 377 | 326 | 407 |
| | 50 | 79 | 99 | 112 | 140 | 158 | 197 | 194 | 242 | 223 | 279 | 250 | 312 | 274 | 342 | 295 | 369 |
| FC-10 inch Fresh Air Damper 10" Intake Hood | 10 | 148 | 185 | 210 | 262 | 297 | 371 | 363 | 454 | 420 | 525 | 469 | 586 | 514 | 642 | 555 | 694 |
| | 30 | 135 | 169 | 191 | 239 | 270 | 338 | 331 | 414 | 382 | 478 | 427 | 534 | 468 | 585 | 506 | 632 |
| | 50 | 125 | 156 | 177 | 221 | 250 | 312 | 306 | 383 | 354 | 442 | 395 | 494 | 433 | 541 | 467 | 584 |

*.05 are new modulating appliance parameters. 0.1 are the traditional appliances. Once the design gets out of range additional electrical consumption begins to take place.*

## Rule of Thumb Method

1,500 to 2,000 sq. ft. - FC-6
2,500 to 3,000 sq. ft. - FC-7
3,000 to 3,500 sq. ft. - FC-8

These may be appropriate for homes with average duct runs up to 15 ft. with mid-range static pressure. We recommend that you double check your results using the standard method illustrated on the previous page. It's important to size the damper and system to meet ASHRAE 62.2. If you have additional questions, contact technical service.

## Locating the Fresh Air Inlet

Locate the air intake hood at least 3 ft. (36") from the ground and 10 ft. horizontally from any gas or oil burner or any source of combustion gases or fumes. Locate at least 10 feet horizontally from garbage cans or other sources of odors. Always use a vent hood with an integrated grate to prevent birds and small animals from entering the duct.

# Heat Recovery Ventilator

The Healthy Home System™ Control intelligently manages the central fan and the HRV/ERV to provide **FRESH** air in the home all year round...even when not heating or cooling.

FRESH

## The Ultimate Solution for Fresh Air

The gold standard in Fresh Air Ventilation is HRV/ERV technology. With Heat Recovery Ventilation (HRV) and Energy Recovery Ventilation (ERV), the homeowner realizes maximum energy efficiency, a balanced approach to fresh air, and additional benefits such as humidity control. HRV is recommended for colder climates and ERV is recommended for hot, humid climates. See the map below for more details. Both can be independently ducted or integrated into the ductwork of the forced air system (new or retrofit) and both work 24/7 to ensure a steady flow of fresh air in the home.


*FC95HRV* *FC155HRV* *FC200HRV*

### Heat Recovery Ventilation (HRV)

The unique dual-stream airflow design of Field Controls' HRV keeps outgoing stale air separate from incoming fresh air and completely rejuvenates the air throughout your entire home up to eight times a day.

Our balanced ventilation technology replaces indoor stale air with an identical amount of fresh air. This balanced ventilation is also critical to prevent moisture build-up during the heating season which can lead to expensive rot damage and hazardous mold.

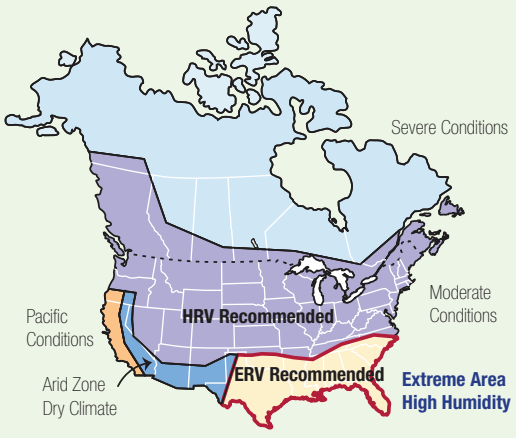
The Field HRV features a patented aluminum core which efficiently transfers heat from outgoing stale air to incoming fresh air. Our HRV lets you enjoy an energy efficient home without breathing harmful indoor fumes from paint, plastics, carpets, adhesives, and household products, or lingering pet odors or moisture that cause mold.

### Fresh Air Quality and Energy Efficiency

Because of the unique ability of an HRV to transfer the temperature of indoor stale air to the incoming fresh air, you'll realize lower heating and cooling costs year round while enjoying all the benefits superior indoor air quality delivers. In fact, the efficiency of the Field Controls HRV is so great that very little of the warmth collected from your home in winter is lost to the outside. In summer, the HRV works in reverse by removing heat from the incoming air and transferring it to the outgoing air, keeping your home cool and fresh.

### Benefits

- Replaces stale air up to 8 times a day
- Maintains a balanced system, exchanging identical amounts of stale air for fresh
- Conserves energy by transferring heat or cool to incoming air
- Helps prevent moisture buildup during heating season
- Three models to choose from
- Ideal for colder climates of the Midwest and Northeast




- ERVs are recommended in regions where high outdoor humidity is cause for operating air conditioning and dehumidification more frequently than a heating system.
- ERVs are not recommended where temperatures fall below 25° F for more than five days.

## Energy Recovery Ventilator (ERV)

Nearly 90% of the energy used to cool a home is required to remove humidity. With the Field ERV, humidity is removed from the air before it is brought into the home – greatly reducing cooling costs. The Field Controls ERV uses membrane technology to transfer moisture and energy and our new, water-washable core is constructed with a non-cellulose material that will not deteriorate with moisture.


*FC150ERV*

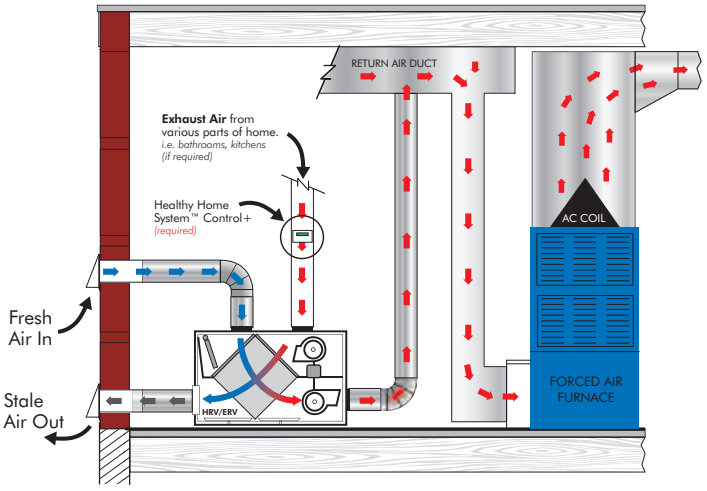
## Benefits

- Replaces stale air up to 8 times a day
- Removes humidity from outside air
- Maintains a balanced system, exchanging identical amounts of stale air for fresh
- Conserves energy by transferring heat or cool to incoming air
- Ideal for warm, humid climates
- Only water-washable ERV core available
- Maintenance-free, energy efficient motor
- Most efficient ERV available

Example: This diagram illustrates how HRV/ERV transfers energy during the heating season.


## *How HRV/ERV Works*

*Fresh outdoor air is drawn into the HRV/ERV. The air is tempered (heated or cooled) as it passes through the core. Humidity is removed in ERV units. The tempered air is then distributed throughout the house via the HVAC ductwork. Stale air is circulated back to the HRV/ERV. As it passes through the unit, the heat/cool is extracted from the air and is used to temper the incoming air. The stale air is expelled outside. The system is 100% balanced. It expels the identical amount of air that is drawn into the home. Fresh air is cycled through the entire home up to 8 times per day.*



# Media Air Cleaner™

## WHOLE HOUSE FILTRATION

CLEAN

## Media Air Cleaner™

The Media Air Cleaner is a whole house air filtration system that combines minimum maintenance with maximum air cleaning capacity. As part of the Healthy Home System, the Media Air Cleaner works with the Healthy Home System Control to CLEAN the air in the home all year round...even when not heating or cooling.

The new HeavySeal™ feature is designed to create a super-tight envelope focusing air to and through the filter. The HeavySeal™ passes the duct blast test *(at 25 pascals/ .1 inches water column)* and reduces leakage as low as 2.0 CFM.

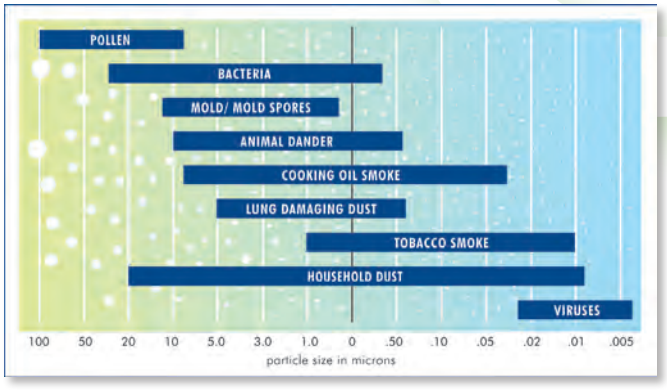
### Whole house air filtration

Field Controls Media Air Cleaners install in the return duct of virtually any forced air heating or cooling system...gas, oil or electric. As air flows through the system, the Media Air Cleaner traps particles as small as 1.0 micron*, including pollen, dust, and dander.

### High capacity. Minimum resistance

Field Controls MERV** pleated media filter contains enough air cleaning capacity to clean air for months without restricting air flow or putting a strain on the air handling system. Our filter media is electrostatically "supercharged" for better efficiency and longer service life. It is moisture resistant and will not support the growth of bacteria or other microbes.

Indoor Air Pollution Particle Sizes




* One micron= .000039 inches
** MERV (Minimum Efficiency Reporting Value)


*Three sizes available (20" x 25", 16" x 25", 20" x 20")*

*Right Angle Model*

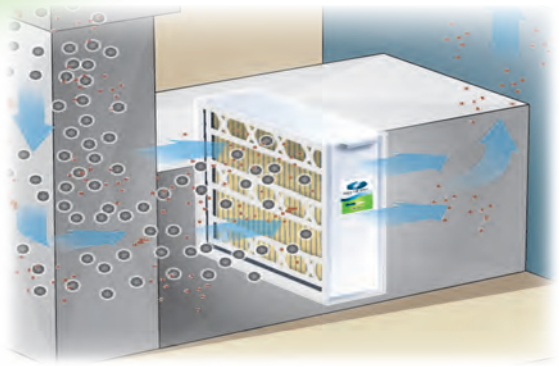
### Features

- Super Tight HeavySeal™
- Contractor installation and easy media filter replacement
- Installs into ducted central heating and air conditioning system
- High efficiency MERV 8 or 11 filter traps particles as small as 1.0 micron, including pollen, dust, mold, and dander
- Meets ANSI/ASHRAE 52.2 standards
- Robust heavy duty metal construction
- Perfect for any residential or commercial forced air heating or cooling system up to five tons

### *How It Works*

*The Field Controls Media Air Cleaner cabinet is installed in the return air duct of the forced air system prior to the furnace and air handler. As air passes through the system, airborne particles are trapped within the filter media.*

*Unlike traditional filters, our Media Air Cleaner is able to trap up to 100 times more while maintaining efficiency and arrestance ratings in compliance with ASHRAE Standard 52.2.*



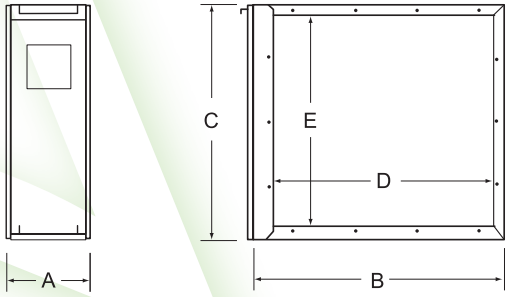
## Custom Colors Now Available*

We now offer custom paint colors for our Media Air Cleaner cabinets. Choose from colors that match OEM equipment throughout the industry.

**Available custom colors:** Equipment Grey (Ducane, Carrier, Rheem), Appliance Matte Grey (Armstrong, Daikin), Goodman Grey (Amana), Trane Green, Bryant Tan, Universal White, York Champagne (Luxaire, Coleman) and Galvanized Only.

**Built to order, allow 3-4 weeks for delivery. Minimum order required, call for details.*

The Healthy Home System™ Control intelligently manages the central fan, allowing the Media Air Cleaner to **CLEAN** the air in the home all year round...even when not heating or cooling.

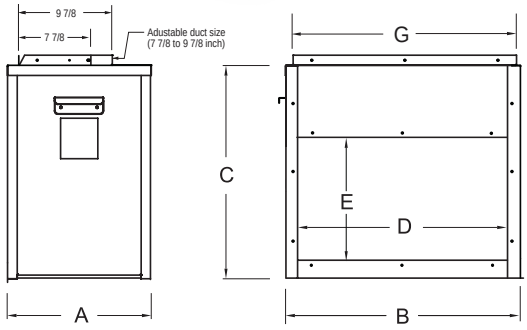



FC8 AND FC11 MEDIA AIR CLEANER CABINET

CLEAN

## Cabinet Dimensions (inches)

| Model | A | B | C | Duct Opening | |
|---|---|---|---|---|---|
| | | | | D | E |
| FC8-2025HS | 7 1/8 | 24 3/8 | 21 3/8 | 21 7/16 | 19 3/8 |
| FC8-1625HS | 7 1/8 | 24 3/8 | 17 3/8 | 21 1/2 | 15 3/8 |
| FC11-2025HS | 7 1/8 | 24 3/8 | 21 3/8 | 21 7/16 | 19 3/8 |
| FC11-1625HS | 7 1/8 | 24 3/8 | 17 3/8 | 21 1/2 | 15 3/8 |
| FC11-2020HS | 7 1/8 | 20 3/4 | 21 3/8 | 17 13/16 | 19 3/8 |
| FC11-1625T3HS | 4 3/8 | 24 3/8 | 17 1/8 | 21 5/8 | 15 1/16 |
| FCRA11-2025 | 15 11/16 | 25 11/16 | 23 7/16 | 22 7/8 | 13 3/8 |




FCRA11-2025 RIGHT ANGLE CABINET

## MEDIA AIR CLEANER™ REPLACEMENT KITS

### Field Controls

| MODEL | MERV | DESCRIPTION | SIZE (inches) | PART NO. |
|---|---|---|---|---|
| FCRM8-1625 | 8 | Replacement Media - 3 Pack Filter Kit | 16 x 25 x 5 | 46585900 |
| FCRM8-2025 | 8 | Replacement Media - 3 Pack Filter Kit | 20 x 25 x 5 | 46586000 |
| FCRM11-1625 | 11 | Replacement Media - 3 Pack Filter Kit | 16 x 25 x 5 | 46568500 |
| FCRM11-2020 | 11 | Replacement Media - 3 Pack Filter Kit | 20 x 20 x 5 | 46607000 |
| FCRM11-2025 | 11 | Replacement Media - 3 Pack Filter Kit | 20 x 25 x 5 | 46568600 |
| FCRM11-1625/3ABC | 11 | Replacement Media for Trion Air Bear Cub - 3 Pack Filter Kit | 16 x 25 x 3 | 46656600 |
| **Honeywell™** | | | | |
| FCRM11-2025/4HW | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 20 x 25 x 4 | 46656700 |
| FCRM11-1625/4HW | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 16 x 25 x 4 | 46656800 |
| FCRM11-2020/4HW | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 20 x 20 x 4 | 46656900 |
| FCRM11-1620/4HW | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 16 x 20 x 4 | 46657000 |

# Media Air Cleaner™
## MERV RATING

CLEAN

### What is MERV?

Minimum Efficiency Reporting Value, commonly known as MERV** rating, is a measurement scale designed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) to rate the effectiveness of air filters. The scale provides a consistent reference point for HVAC professionals and a filtration effectiveness guide for home and building owners.

The scale is designed to represent the expected performance of a filter when dealing with particles in the range of 0.3 to 10 microns. The MERV rating is from 1 to 16. Higher MERV ratings correspond to a greater percentage of particles captured on each pass, with a MERV 16 filter capturing more than 95% of particles over the full range. Table 1 indicates the typical size and type of contaminants and how they correspond to each MERV range from 1 through 16.

| MERV | Minimum Particle Size | |
|---|---|---|
| 1 to 4 | > 10.0 µm |  |
| 5 to 8 | 10.0 to 3.0 µm |  |
| 9 to 12 | 3.0 to 1.0 µm |  |
| 13 to 16 | 1.0 to 0.3 µm |  |

### Field Controls offers Media Air Cleaners with MERV 8, MERV 11, and MERV 13 ratings.


| Table 2: Particle Size Ranges | | |
|---|---|---|
| Range | Size in microns* | Group |
| 1 | 0.30 to 0.40 | E1 |
| 2 | 0.40 to 0.55 | |
| 3 | 0.55 to 0.70 | |
| 4 | 0.70 to 1.00 | |
| 5 | 1.00 to 1.30 | E2 |
| 6 | 1.30 to 1.60 | |
| 7 | 1.60 to 2.20 | |
| 8 | 2.20 to 3.00 | |
| 9 | 3.00 to 4.00 | E3 |
| 10 | 4.00 to 5.50 | |
| 11 | 5.50 to 7.00 | |
| 12 | 7.00 to 10.00 | |

*Particles are grouped according to size as indicated in Table 2. Table 3 shows particle size efficiency for each range and minimum final resistance for each MERV value.*

* One micron = .000039 inches
** MERV (Minimum Efficiency Reporting Value)

## Table 1: MERV Ratings and Typical Applications

| Typical Contaminant | Typical Application |
|---|---|
| Pollen, dust mites, cockroach debris, sanding dust, spray paint dust, textile fibers, carpet fibers | Minimum residential |
| Mold, spores, dust mite debris, cat and dog dander, hair spray, fabric protector, dusting aids, pudding mix | Better residential, general commercial, industrial workspaces |
| Legionella, lead dust, milled flour, auto emission particulates | Superior residential, better commercial, hospital laboratories |
| Bacteria, sneeze droplets, cooking oil, smoke, face powder, paint pigments | Hospital & general surgery |



## Table 3: MERV Parameters

| Standard 52.2 Minimum Efficiency Reporting Value (MERV) | Composite Average Particle Size Efficiency, % in Size Range, I-Im | | | Average ASHRAE Arrestance, % by Standard 52.1 Method | Minimum Final Resistance | |
|---|---|---|---|---|---|---|
| | Range E1 (0.3 to 1.0) | Range E2 (1.0 to 3.0) | Range E3 (3.0 to 10.0) | | PA | Inches of Water |
| 1 | N/A | N/A | E3 < 20 | Aavg < 65 | 75 | 0.3 |
| 2 | N/A | N/A | E3 < 20 | 65 < Aavg < 70 | 75 | 0.3 |
| 3 | N/A | N/A | E3 < 20 | 70 < Aavg < 75 | 75 | 0.3 |
| 4 | N/A | N/A | E3 < 20 | 75 < Aavg | 75 | 0.3 |
| 5 | N/A | N/A | 20 ≤ E3 < 35 | N/A | 150 | 0.6 |
| 6 | N/A | N/A | 35 ≤ E3 < 50 | N/A | 150 | 0.6 |
| 7 | N/A | N/A | 50 ≤ E3 < 70 | N/A | 150 | 0.6 |
| 8 | N/A | N/A | 70 ≤ E3 | N/A | 150 | 0.6 |
| 9 | N/A | E2 < 50 | 85 ≤ E3 | N/A | 250 | 1.0 |
| 10 | N/A | 50 ≤ E2 < 65 | 85 ≤ E3 | N/A | 250 | 1.0 |
| 11 | N/A | 65 ≤ E2 < 80 | 85 ≤ E3 | N/A | 250 | 1.0 |
| 12 | N/A | 80 ≤ E2 | 90 ≤ E3 | N/A | 250 | 1.0 |
| 13 | E1≤ 75 | 90 ≤ E2 | 90 ≤ E3 | N/A | 350 | 1.4 |
| 14 | 75 ≤ E1 < 85 | 90 ≤ E2 | 90 ≤ E3 | N/A | 350 | 1.4 |
| 15 | 85 ≤ E1 < 95 | 90 ≤ E2 | 90 ≤ E3 | N/A | 350 | 1.4 |
| 16 | 95 ≤ E1 | 95 ≤ E2 | 95 ≤ E3 | N/A | 350 | 1.4 |

# FlexFilter®
## MEDIA AIR FILTER

CLEAN

### The flexible media filter that replaces ALL major brands.

Introducing the patented FlexFilter® from Field Controls. The ultra compact, easy-to-assemble media air cleaner that replaces at least 25 of the most popular models. With seven high efficiency MERV 11 models to choose from, stocking, storing, shipping, and installing media air cleaners just got a whole lot easier.

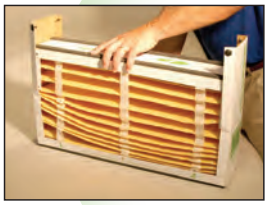
- Replaces ALL major brands
- Installs in seconds
- Seven models
- MERV 11 media
- Compact
- Easy to store

FlexFilter® Patented

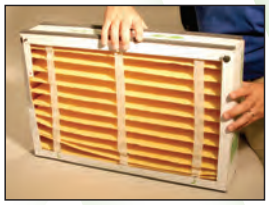

## Installs in Seconds

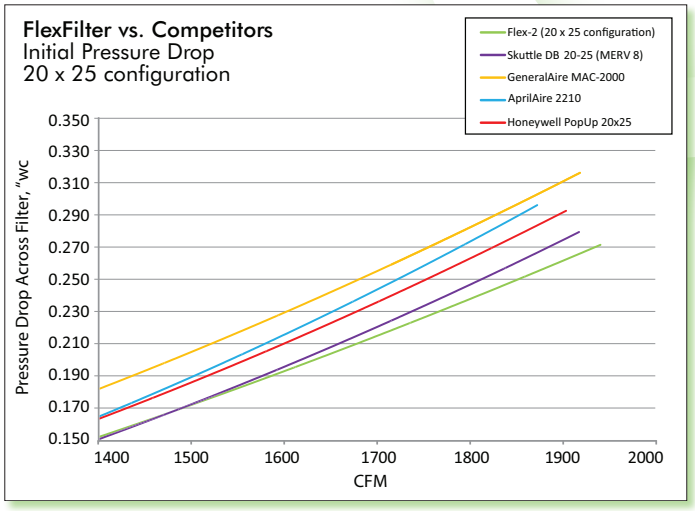
1

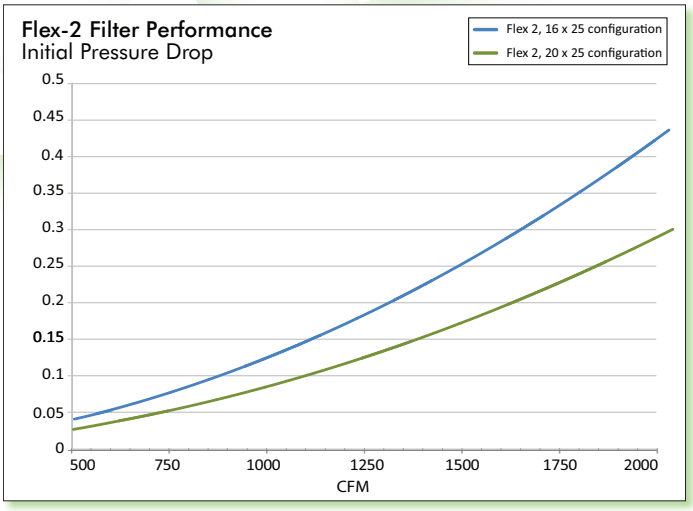
2



3





Color coded for quick selection


Patented

## FlexFilter® Fits!

The perfect filter replacement for ALL major brands. This patented filter is easy to store, installs in just seconds, and selecting the correct model is a snap! Just follow the handy color-coded selection guide below.

### FlexFilter® Replacement Guide

| BRAND | FILTER MODEL | SIZE (inches) | FITS AIR CLEANER MODEL | REPLACEMENT FLEX MODEL | PART NO. |
|---|---|---|---|---|---|
| Field Controls® | FCRM11-2020 | 20 x 20 x 5 | FC11-2020 | FLEX-1 | 46600407 |
| | FCRM11-1625 | 16 x 25 x 5 | FC8-1625 / FC11-1625 | FLEX-2 | 46600401 |
| | FCRM11-2025 | 20 x 25 x 5 | FC8-2025 / FC11-2025 FCRA11-2025 | | |
| Skuttle® | 000-0448-007 (003) | 20 x 20 x 5 | DB-20-20 | FLEX-1 | 46600407 |
| | 000-0448-008 (004) | 16 x 20 x 5 | DB-20-16 | | |
| | 000-0448-005 (001) | 16 x 25 x 5 | DB-25-16 | FLEX-2 | 46600401 |
| | 000-0448-006 (002) | 20 x 25 x 5 | DB-25-20 | | |
| GeneralAire® | 5FM2020 (4531) | 20 x 20 x 5 | MAC2020 / MAC2020M | FLEX-1 | 46600407 |
| | 5FM1625 (4511) | 16 x 25 x 5 | MAC1400 / MAC1400M | FLEX-2 | 46600401 |
| | 5FM2025 (4501) | 20 x 25 x 5 | MAC2000 / MAC2000M MAC-L | | |
| Trion® | 255649-103 / 259112-113 | 20 x 20 x 5 | 455602-225 / 455602-725 | FLEX-1 | 46600407 |
| | 255649-105 / 259112-105 | 16 x 25 x 5 | 455602-125 / 455602-625 | FLEX-2 | 46600401 |
| | 255649-102 / 259112-102 | 20 x 25 x 5 | 455602-025 / 455602-525 266380-010 / 266380-510 447380-010 / 477380-510 | | |
| Ultravation® | 91-013 | 20 x 20 x 5 | 90-116 | FLEX-1 | 46600407 |
| | 91-012 | 16 x 20 x 5 | 90-115 | | |
| | 91-005 | 16 x 25 x 5 | 90-106 | FLEX-2 | 46600401 |
| | 91-006 | 20 x 25 x 5 | 90-107 | | |
| | | | 90-064 / 90-027 | | |
| Honeywell® | POPUP1620 | 16 x 20 x 4 | F100F2028/F200E1003 | FLEX-3 | 46600406 |
| | FC100A1003 | 16 x 20 x 4 | F100F2028 | | |
| | FC200E1003 | 16 x 20 x 4 | F200E1003 | | |
| | POPUP2020 | 20 x 20 x 4 | F100F2036/F200E1029 | | |
| | FC100A1011 | 20 x 20 x 4 | F100F2036 | | |
| | FC200E1011 | 20 x 20 x 4 | F200E1029 | | |
| | POPUP1625 | 16 x 25 x 4 | | FLEX-4 | 46600405 |
| | FC100A1029 | 16 x 25 x 4 | F100F2002 | | |
| | FC200E1029 | 16 x 25 x 4 | F200E1011 | | |
| | POPUP2025 | 20 x 25 x 4 | F100F2010/F200E1037 | | |
| | FC100A1037 | 20 x 25 x 4 | F100F2010 | | |
| | FC200E1037 | 20 x 25 x 4 | F200E1037 | | |
| Carrier® Bryant® | EXPXXFIL0016 | 16 x 25 x 4 | EZXCAB1016 | FLEX-4 | 46600405 |
| | EXPXXFIL0316 | | | | |
| | EXPXXFIL0020 | 20 x 25 x4 | EZXCAB1020 | | |
| | EXPXXFIL0320 | | | | |
| Aprilaire® | 201 210 + 1213 213 + 1213 | 20 x25 x4 | 2200 | FLEX-5 | 46600402 |
| | 210 | | 1210, 2210, 3210, 4300 | | |
| | 213 | | 1210, 2210, 3210, 4300 | | |
| | 310 | 19 x 20 x 4 | 1310, 2310, 3310, 4300 | FLEX-6 | 46600403 |
| | 313 | | 1310, 2310, 3310, 4300 | | |
| | 401 410 + 1413 413 + 1413 | 16 x 28 x 4 | 2400 | FLEX-7 | 46600404 |
| | 410 | | 1410, 2410, 3410, 4400 | | |
| | 413 | | 1410, 2410, 3410, 4400 | | |

CLEAN


**Plastic Buttons**
Snap into place quickly and easily

**MERV 11 Media**
High efficiency with minimal pressure drop

PURE

## Pure Air. Who Needs It?

The air in your home can be literally filled with germs. Bacteria, viruses, mold spores, fungi, and dust mites are invisible to the naked eye, and they multiply rapidly. Ultra violet light helps neutralize these invaders so they don't overwhelm your family. Our UV-Aire® products radiate germicidal UV light inside your ductwork to purify your air as it circulates through your HVAC system.

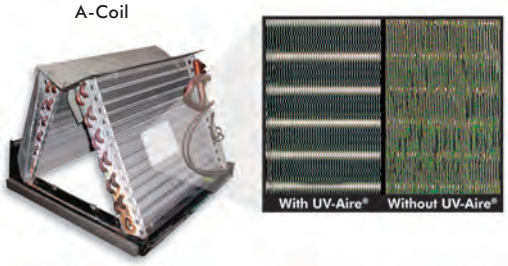
### *How It Works*

*UV-Aire uses the energy from a specially designed, high-intensity UVC germicidal lamp to reduce microorganisms in the entire home as they cycle through the HVAC system. Mounted inside the ductwork, the UV-Aire neutralizes most contaminants as they pass the lamp.*

*The process requires very little maintenance and costs just pennies a day to operate. The UV-Aire could be one of the best health and comfort investments a homeowner ever makes.*

*UV's effectiveness in neutralizing bacteria is directly related to the microorganism's exposure time. Indoor air in a typical residential forced-air HVAC system will be recirculated 40-75 times a day. With a UV generating lamp mounted in the HVAC duct, cumulative exposure can be very effective in controlling indoor bacteria and other airborne contaminants. UV rays will also neutralize germs and mold that breed in drain pans and A-coils. Properly positioned, an ultraviolet system can significantly reduce indoor air contamination and prevent the growth of new microorganisms.*

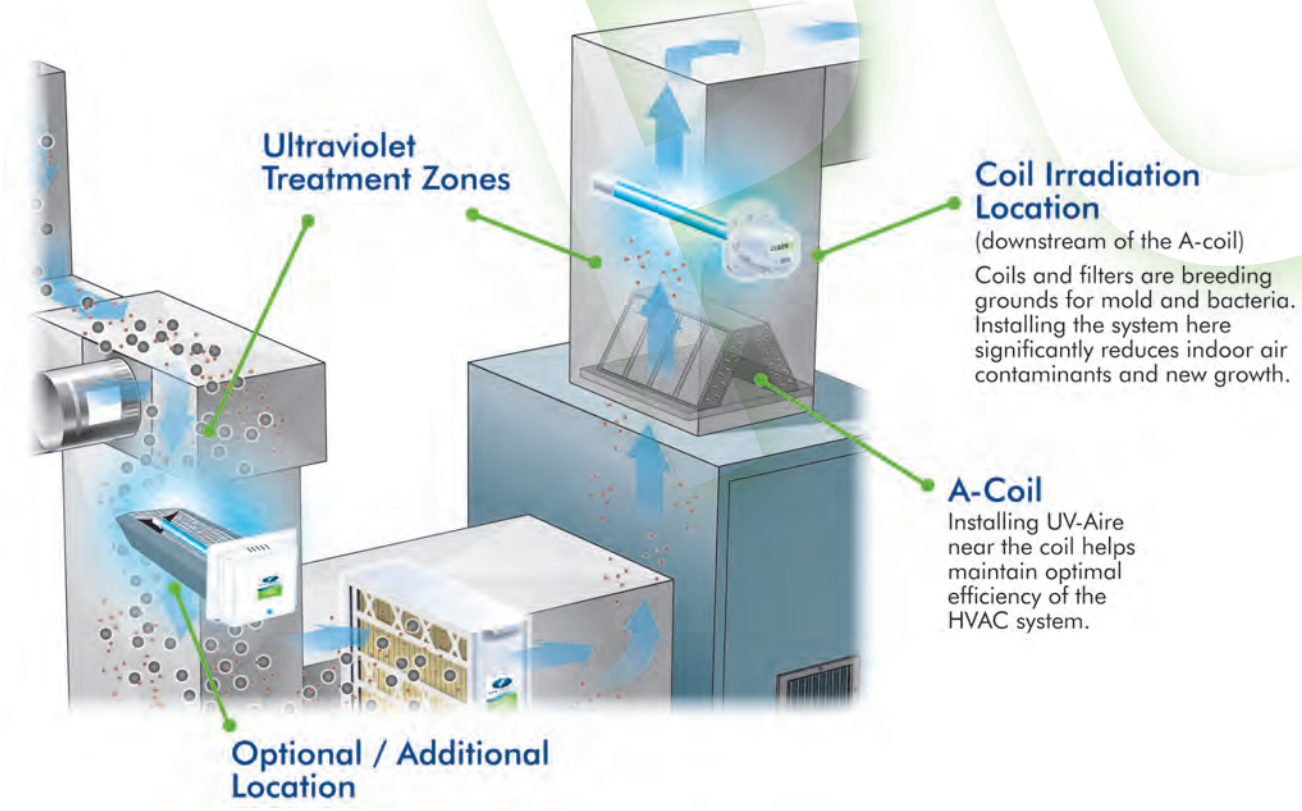
Surface Test Results




Installing UV-Aire near the coil helps keep the coil clean and maintains optimal efficiency of the HVAC system.

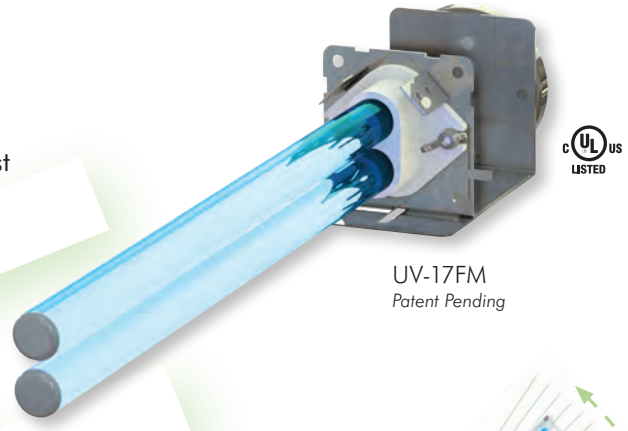
### *UV-Aire in the Lab*

*We have three independent studies on the efficiency and effectiveness of the UV-Aire. For complete details, download "How Effective is UV for Air Purification?" at fieldcontrols.com/pdfs/UVTestingtech.pdf.*



# FlexMountUV

The newest addition to our UV-Aire® line is the most powerful and versatile yet! It takes half the space of traditional UV units but delivers twice the power. Plus, installation is a breeze.

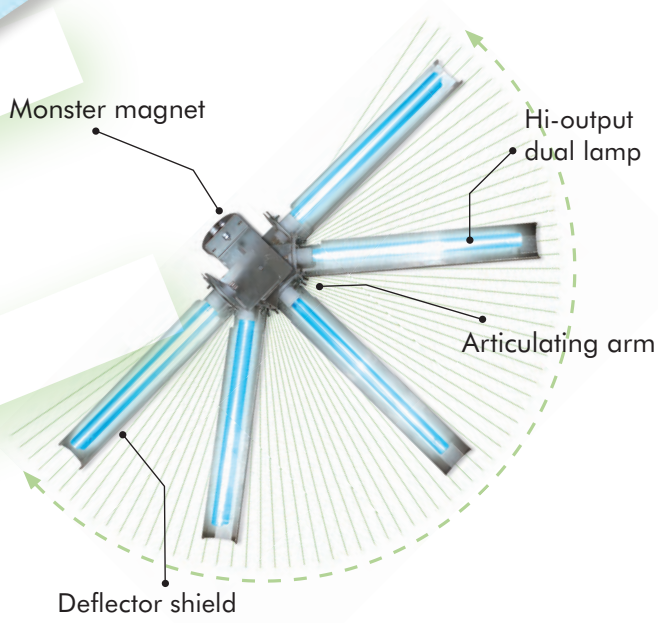


UV-17FM
*Patent Pending*

## FAST.
- EZ installation with monster magnet
- No holes or fasteners necessary
- Installs in minutes
- No ductwork penetration

## FLEXIBLE.
- Internal or external mount
- 180° articulating bracket
- Two sizes - 13" and 17"
- Mounts over A-coil, inside A-coil, or in duct
- Ideal for package systems

## FORCEFUL.
- Twin tube, high intensity lamp
- Deflector shield included
- Ballast and water resistant cable included

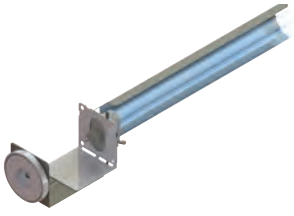



PURE

## *How It Works*

*The FlexMountUV™ can be installed using the monster magnet inside virtually any metal cabinet. It is easily positioned over or inside the A-coil with an articulating arm that pivots through 180 degrees. The optional deflector shield focuses the UV energy where it is needed most.*

*The high output dual lamp generates twice the UV power in the space of a single lamp. For use in a traditional installation, the magnet can be easily removed allowing fasteners to be used instead.*

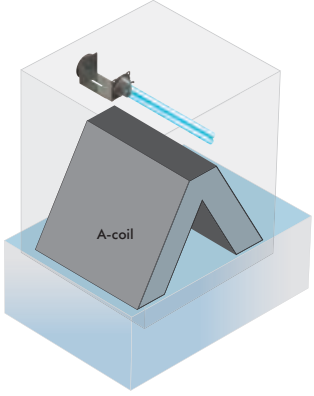


*Deflector shield included*

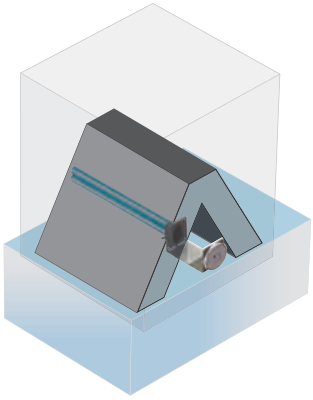
*Remote ballast and water resistant cable included.*

## Installation Options

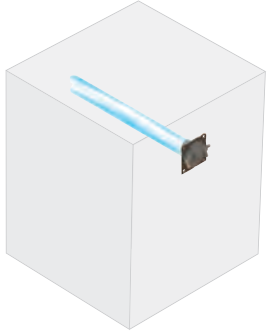
**Over the A-coil**
Magnet Mount




**Inside the A-coil**
Magnet Mount



**Optional External Mount**
Traditional Through Duct Mount



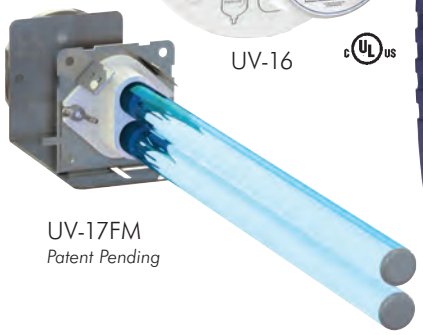
**Note:** *50VA Transformer required, ask for Part #46638900 TR50VA*

# UV-Aire® In-Duct Models

## In-duct UV-Aire® Models for Forced Air Systems

Field Controls offers a complete line of UV-Aire products for any home or business, with a variety of duct-mounted models designed for forced-air heating and cooling systems. UV-Aire germicidal lamps continuously attack airborne mold, bacteria, and viruses as they circulate through your ductwork. As part of the Healthy Home System, the in-duct UV-Aire works with the Healthy Home System Control to ensure PURE air in the home all year round...even when not heating or cooling.

UV-16


UV-17FM
*Patent Pending*


UV-12

PURE

### FlexMountUV™ UV-17FM, UV-13FM

- Installs inside cabinet with monster magnet
- High output dual UVC lamp
- Lamp bracket rotates through 180°
- Includes deflector shield, ballast, and water resistant cable

### Healthy Home Combo Systems Duo-2000, Trio-1200, Trio-2000

- High output UVC lamps
- Combines with PRO-Cell™ to elminate odors/VOCs
- Trio includes MERV 13 filter and two lamps

### UV-12, UV-18, UV-28, UV-12HP, UV-18HP, UV-28HP

- Hinged cover for easy accessibility
- Includes patented angle bracket and duct board mounting kit
- Installs easily and plugs into a standard 120v outlet
- All UV-HP (heatpump) models are 240v

### UV-18X Dual Lamp

- Double lamp maximizes intensity and effectiveness up to 4,000 sq. ft.
- Includes patented angle bracket and duct board mounting kit

### UV-16 Remote

- 120 volt or 24 volt with plug-in transformer
- Compact design
- Built-In safety switch
- E-Z lamp replacement
- Includes deflector shield


### UV-12E, UV-18E, UV-28E External

- For external package systems and rooftop applications
- Hard wired for 120v, 208v, or 240v
- Includes patented angle bracket

## Installation Options

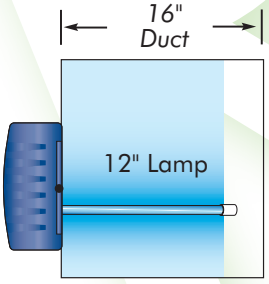
The UV-Aire can be installed in ducts nine inches and larger. Each unit comes with a duct board mounting kit and a patented angle bracket (except UV-16 models). A dual lamp model is available for commercial applications and/or increased potency. There is also a model designed specifically for heat pumps and a model for outdoor installations.

*Note: When multiple lamps are used, spacing between lamps should be at least four inches. Angle option allows longer lamps to fit in smaller ducts.*

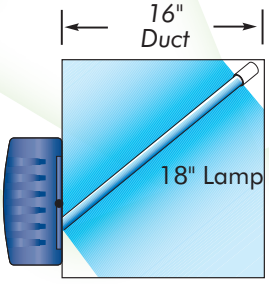
**To maintain maximum benefits, lamps should be replaced annually.**

It is important that lamps be replaced when the ultraviolet output falls below minimum requirements for protection. Even though a lamp will appear to be operating effectively because it still maintains the visible blue glow, the ultraviolet output will be significantly reduced after 9000 hours of use.

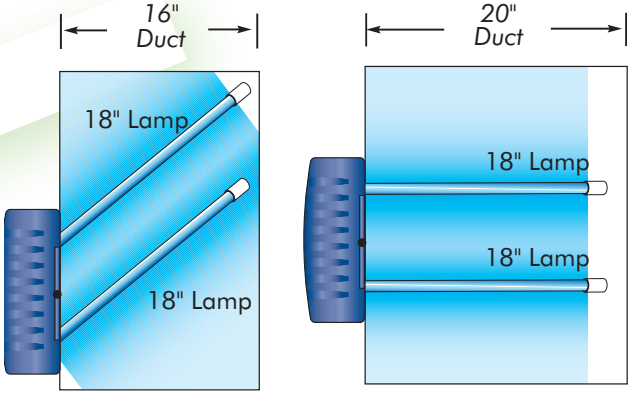
**Good:**
Standard installation




**Better:**
Patented angled installation single lamp




**Best:**
Two angled lamps or two lamps perpendicular




### PATENTED ANGLE BRACKET

- Angle allows longer lamps to fit into smaller ductwork, maximizing effectiveness
- Ensures the entire cross section of the duct is irradiated
- Swivel arm allows for easy lamp replacement

### DUCT BOARD MOUNTING KIT

- Makes mounting to duct board simple
- Designed to increase stability on the duct board

### DEFLECTOR SHIELD

- Focuses the UV light in the proper direction
- Protects plastic and rubber elements from the effects of UV

### *Facts about UV*

- *Since the first UV irradiation system was used, the disinfection of medical equipment using UV has been a common and reliable practice.*
- *UV disinfection has been determined to be adequate for inactivating bacteria and viruses.*
- *The germicidal effects of UV light cause photochemical damage to DNA and RNA within microorganisms.*
- *"...ultraviolet radiation, properly integrated with heating, ventilating, and air conditioning systems, shows the most promise as a widely applicable means of air disinfection." Richard Riley, M.D.*

# Healthy Home Duo

PURE

## Two Stage Air Purification

The Healthy Home Duo combines two state-of-the-art technologies to purify the air in your home. In the first stage of the Duo, the air is exposed to a powerful, ultraviolet C (UVC) germicidal light that neutralizes airborne invaders such as bacteria, viruses, mold and fungi.

The second stage of the Duo uses patented PRO-Cell™ technology, our exclusive Photo-Reactive Oxidation process. When the patented aluminum honeycomb cells are exposed to the UVC germicidal light, the PRO-Cell's extensive surface area transforms the odors and volatile organic compounds (VOCs) into harmless, odorless water vapor and carbon dioxide.

The PRO-Cell core is maintenance-free and never needs replacing. The Healthy Home Duo can be installed by your HVAC contractor over the A-coil, in the return, or in the supply duct of your HVAC system. For more information, visit fieldcontrols.com.

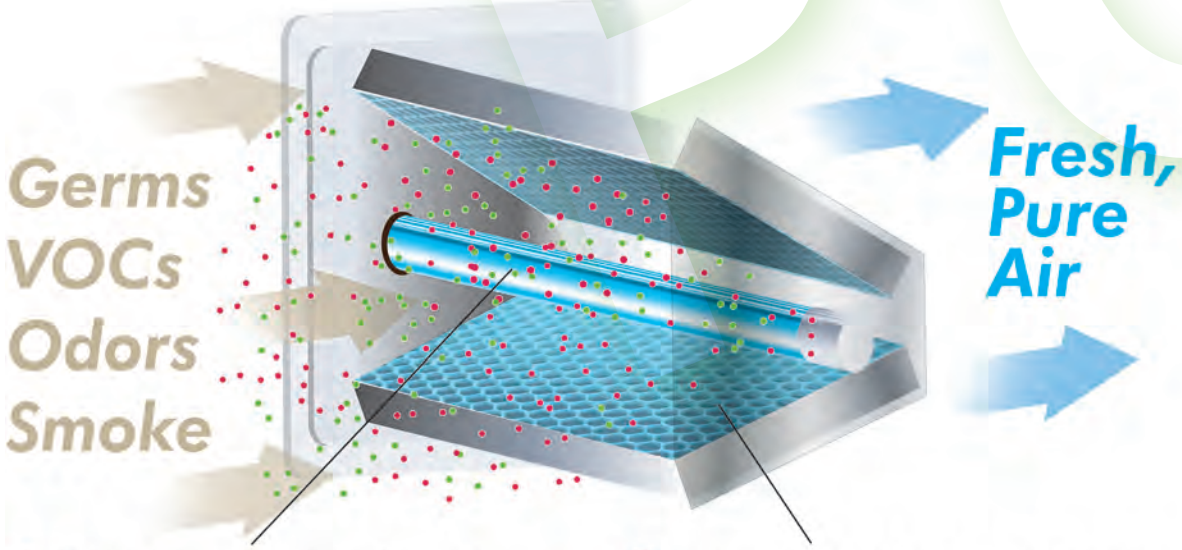
**Coming Soon!**
**24 Volt Model**


Intertek 9800085

**Duo-2000**
*Patented*

Part of the
**Healthy Home System™**
FIELD CONTROLS

## *Two Stage Process*




1 **UVC Germicidal Purification**
Neutralizes and destroys bacteria, viruses, mold, and fungi

2 **Patented PRO-Cell™ Technology**
Aluminum honeycomb cells dramatically reduce VOCs, odors, and smoke

## Germs

UVC germicidal light **neutralizes** airborne microbes such as **bacteria, viruses, mold, and fungi**.

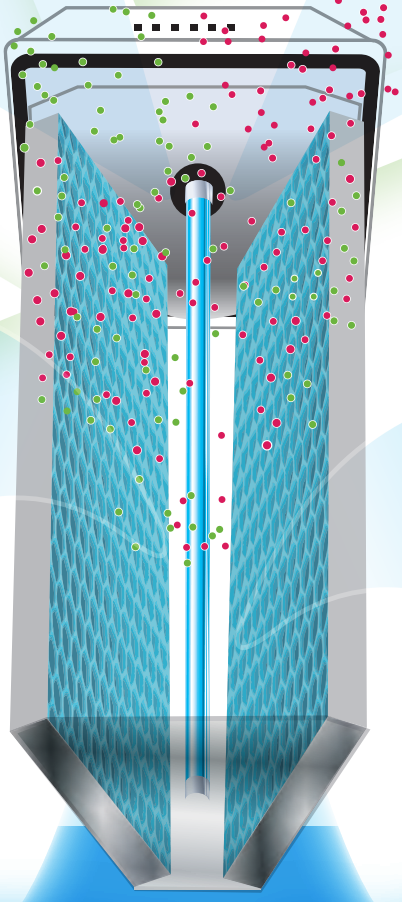
## VOCs & Odors

Patented PRO-Cell™ honeycomb **removes odors, smoke, and gases** from cleaning products (VOCs), and **eliminates ozone and formaldehydes.**


Neutralizes **93.6%** of germs in 2 Hours

Eliminates **88%** of odors

Removes **80%** of VOCs in 2 Hours



**6** patents for our exclusive **PRO-Cell™ Technology process**

**3,500** square inches of **PRO-Cell™** photo-reactive surface area

# FRESH, PURE AIR

LIMITED 10 YEAR WARRANTY

PURE

# Healthy Home Trio

## Three Stage Air Purification

The Healthy Home Trio is a 3-in-1 package that keeps the air in your home fresh, clean, and pure. As air enters the Trio, it is filtered with a MERV 13 filtration media. This pleated 4 inch filter traps particles as small as .3 micron including mold, bacteria, dust, dander, and pollen. After the filter, the air must pass through an ultraviolet C (UVC) germicidal treatment zone guarded by two powerful 24" UVC germicidal lamps. These lamps neutralize airborne microbes such as bacteria, viruses, mold, and fungi.

The final phase uses patented PRO-Cell™ technology, our exclusive Photo-Reactive Oxidation process. When the patented aluminum honeycomb cells are exposed to the UVC germicidal light, the PRO-Cell's extensive surface area transforms the odors and volatile organic compounds (VOCs) into harmless, odorless water vapor and carbon dioxide.

The PRO-Cell core is maintenance-free and never needs replacing. The Healthy Home Trio can be installed by your HVAC contractor over the A-coil, in the return, or in the supply duct of your HVAC system. For more information, visit fieldcontrols.com.

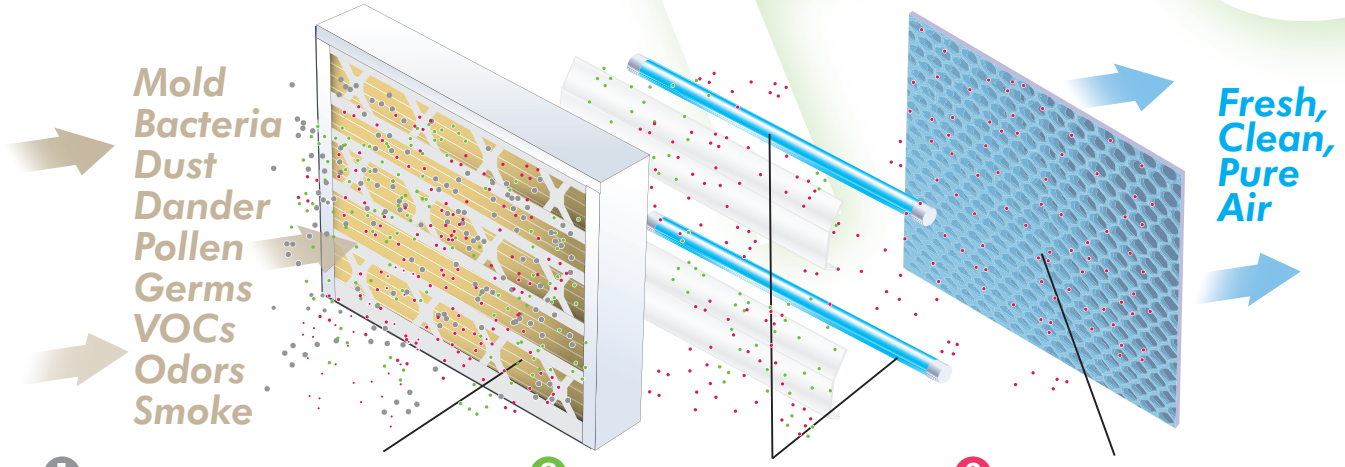
PURE

**Trio-1200**
*Patented*

**Trio-2000**
*Patented*

Part of the
**Healthy Home System™**
FIELD CONTROLS

## *Three Stage Process*




1. **MERV 13 High Efficiency Filtration**
   Traps particles including mold, bacteria, dust, dander, and pollen
2. **UVC Germicidal Purification**
   Neutralizes and destroys bacteria, viruses, mold, and fungi
3. **Patented PRO-Cell™ Technology**
   Aluminium honeycomb cells dramatically reduce VOCs, odors, and smoke

## Dust, Dander & Pollen

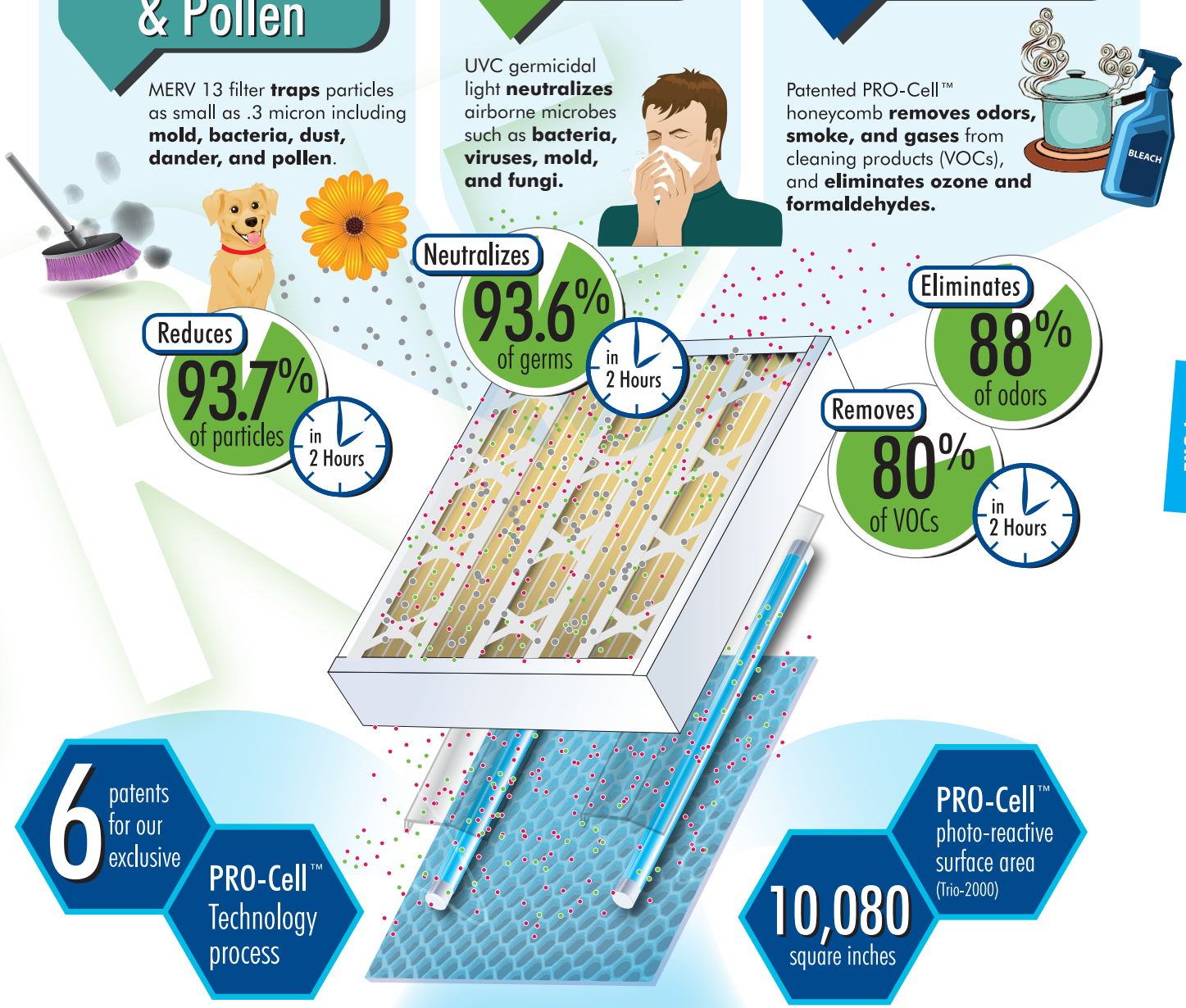
MERV 13 filter **traps** particles as small as .3 micron including **mold, bacteria, dust, dander, and pollen**.

## Germs

UVC germicidal light **neutralizes** airborne microbes such as **bacteria, viruses, mold, and fungi.**

## VOCs & Odors

Patented PRO-Cell™ honeycomb **removes odors, smoke, and gases** from cleaning products (VOCs), and **eliminates ozone and formaldehydes.**




**6** patents for our exclusive **PRO-Cell™ Technology process**

**10,080** square inches **PRO-Cell™ photo-reactive surface area** (Trio-2000)

# FRESH, CLEAN, PURE AIR

LIMITED 10 YEAR WARRANTY

PURE

# The Ultimate Commercial Air System

The Cube commercial air purifier is designed for applications or work environments where air quality is essential. High efficiency particle filtration is combined with up to three stages of PRO-Cell™ odor and VOC reduction. This multi-stage treatment effectively and efficiently cleans the air in a single pass for systems up to 6.0 tons. The Cube is designed for use in any environment where harmful odors, volatile organic compounds, viruses or other airborne contaminants are a concern. The Cube's effectiveness is multiplied in recirculating HVAC systems where the air quality improves with each pass.

PURE

## System Options

**Recirculating systems** can be outfitted with an optional post filter to trap targeted gases or with an all-purpose charcoal filter to further control odors.

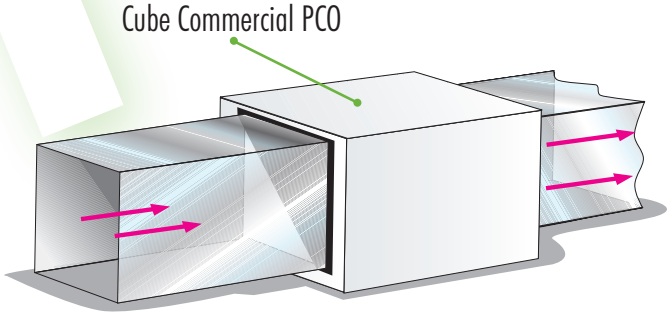
**Exhausting systems** can be outfitted with a third PRO-Cell™ module with specialized output to completely eliminate odors emitted outside the building.

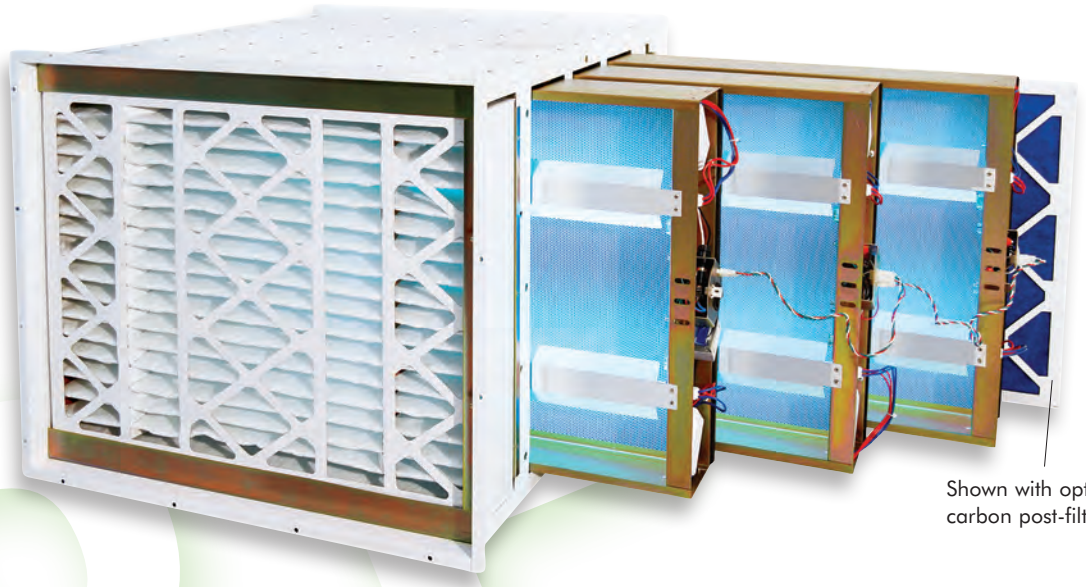
### Standard configuration includes:

- One MERV 13 high efficiency filter
- Three patented PRO-Cell™ PCO modules
- One additional slot for a post-filter

### Typical commercial applications include:

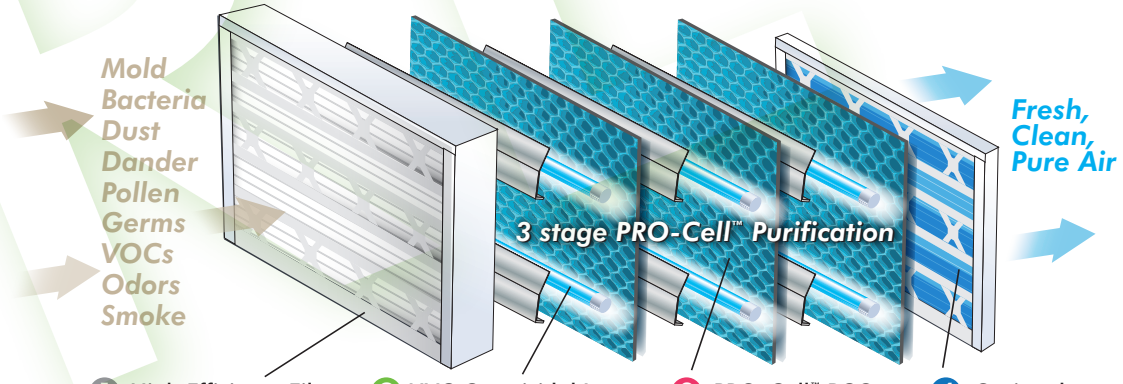
- Printing Companies
- Nail & Hair Salons
- In Vitro Fertilization Clinics
- Schools
- Clean Rooms
- Laboratories
- Medical Clinics
- Pet Stores
- Vet Hospitals
- Fabric and Carpet Stores
- Health Clubs
- All Environments with Inks, Solvents, and VOC-Generating Chemicals





Shown with optional carbon post-filter






**1 High Efficiency Filter**
- MERV 13 high efficiency 4" pleated pre-filter
- Traps particles as small as .3 micron including mold, bacteria, dust, dander, and pollen

**2 UVC Germicidal Lamps**
- Two high output UVC germicidal lamps per module
- Three ultraviolet germicidal treatment zones are standard
- Neutralizes airborne microbes such as bacteria, viruses, mold, and fungi
- UVC magnifies PRO-Cell™ performance up to 200%

**3 PRO-Cell™ PCO**
- Patented PRO-Cell™ panels that clear the air of smoke, odors, and VOCs
- Transforms odors, smoke, and volatile organic compounds (VOCs) into harmless, odorless water vapor and carbon dioxide
- Maintenance free PRO-Cell™ core

**4 Optional**
Carbon Filter

## Packaged and Custom Solutions for Business and Industry

| Style | | Model | Description |
|---|---|---|---|
| FlexMountUV™ |  | UV-13FM<br>UV-17FM | FlexMount can install traditionally through the duct or magnetically inside the duct.<br>Available in 13" and 17" high intensity UVC germicidal lamp options. |
| Twist-n-Lock |  | UV-16/120<br>UV-16/24 | Compact "Twist-n-Lock" design for easy installation and lamp replacement.<br>16" high intensity UVC germicidal lamp in 24V and 120V models. |
| External Mount |  | UV-12*<br>UV-18*<br>UV-28*<br>UV-18X | Robust, through the duct units with high intensity UVC germicidal lamps.<br>Available in 12", 18" & 28" models.<br>Also in dual 18" lamp (18X model) for larger applications. |
| Outdoor |  | UV-12E<br>UV-18E<br>UV-28E | Outdoor mount design for rooftop or package heating and cooling systems.<br>High intensity UVC germicidal lamps in 12", 18" and 28" models. |
| Combo Systems |  | Duo-2000 | The DUO is two products in one.<br>1 UVC germicidal lamp sterilizes viruses, bacteria, mold, etc.<br>2 PRO-Cell™ technology neutralizes VOCs, odors, and smoke. |
| |  | Trio-1200<br>Trio-2000 | The Trio is three products in one.<br>1 UVC germicidal lamp sterilizes viruses, bacteria, mold, etc.<br>2 PRO-Cell™ technology neutralizes VOCs, odors, and smoke.<br>3 Media Air Cleaner for whole house filtration. |

*Also available in HP model 240V

# Selection Guide

| Features | Applications |
|---|---|
| • Monster magnet installs inside the duct<br>• No duct penetration required<br>• High intensity twin tube technology<br>• 180° articulating bracket<br>• Deflector shield included<br>• UV view port<br>• No ozone generation | Ideal for any forced air system including outdoor package units.<br>Mounts over, under, or inside the A-coil. |
| • Built-In safety switch<br>• Deflector shield included<br>• Duct board mounting kit included<br>• 24V unit includes plug-in transformer<br>• UV view port<br>• No ozone generation | In-duct remote UVC germicidal light designed for forced-air heating and cooling systems.<br>Can mount in return duct, supply duct, or over the A-coil. |
| • Hinged cover for easy lamp changes<br>• Plug into any standard 120v outlet<br>• Patented angle bracket included<br>• Duct board mounting kit included<br>• UV view port<br>• No ozone generation | In-duct remote UVC germicidal light designed for forced-air heating and cooling systems.<br>Can mount in return duct, supply duct, or over the A-coil. |
| • Hard wired for 120v, 208v, or 240v<br>• NEMA 3 outdoor enclosure<br>• Patented angle bracket included<br>• UV view port<br>• No ozone generation | For outdoor installations on package systems and rooftop applications. |
| • Patented PRO-Cell™ technology<br>• Catalyst never needs replacing<br>• High intensity 24" UVC germicidal lamp<br>• Two year lamp life efficiency<br>• No ozone generation | 2-in-1 system is ideal for applications where odors, smoke or other toxic gas may be present.<br>Installs over the A-coil, in the return, or in the supply duct of any forced air system. |
| • Patented PRO-Cell™ technology<br>• Catalyst never needs replacing<br>• Two high intensity 24" UVC germicidal lamps<br>• Two year lamp life efficiency<br>• MERV 13 filtration<br>• No ozone generation | 3-in-1 system is ideal for applications where odors, smoke or other toxic gas may be present.<br>Installs in the return duct of any forced air system, including outdoor package units. |

# UV Testing

## Independent Lab Testing

For many years, ultraviolet light has proven effective in sterilizing medical equipment, purifying water and processing food. Currently, the use of UV lights is gaining industry acceptance in HVAC applications. Microbe Management, Inc., a testing agency in Greenville, NC, has conducted three separate tests to examine UV's effect on indoor air quality. The test results reviewed in this article conclude that UV is an integral part of a whole house approach to improving Indoor Air Quality.

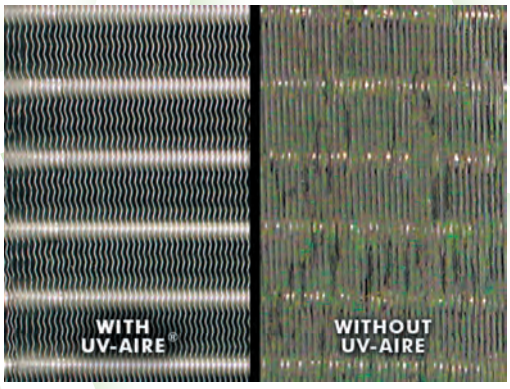
## Attack the Source

While experts disagree on the root causes of many IAQ problems, there is consensus that stopping problems at the source is crucial to long-term air quality improvement. First, the homeowner must eliminate any unwanted sources of moisture in the home such as roof leaks and drainage problems. Likewise, the air conditioning coil must be addressed since it is a natural breeding ground for molds, which thrive in a dark, moist environment.

Familiar with the rank smell generated when switching from air conditioning to heat mode? That is the smell of mold and bio-film burning off the coil. Whenever the blower is engaged, mold spores from contaminated A-coils are released into the ductwork and distributed throughout the building. These spores then seek alternative surfaces in other parts of the home to breed and multiply.

## Surface Test: UV Neutralizes and Prevents Mold on A-Coils

A specific test was designed to determine UV's effectiveness in treating mold on coil surfaces. The test simulated the damp, dark settings where A-coils are found. In this study "We took a standard A-coil, sterilized it, introduced two kinds of mold and then placed it in a controlled, moisture-laden environment," says Bernard Kane, of Microbe Management. "We created two separate chambers in our lab. One chamber was bathed in UV light. The other was not." The results were dramatic and conclusive. The side of the A-coil that was exposed to the ultraviolet light was clean and clear of mold growth. Mold continued to grow unabated on the side without UV. Subsequently, the contaminated side was bathed in UV light and the mold was eradicated. Kane summarized the results: "Properly positioning a UV lamp over the A-coil in a residential or commercial air conditioning system can eliminate surface mold on the coil and prevent future mold growth as well."




## Airborne Testing: Single Pass and Cumulative Tests

Bacteria and viruses are introduced into the building by its occupants and often cannot be controlled at the source. Therefore, it is important to attack these airborne invaders early and often, before they have an opportunity to multiply. The single pass test proves that UV effectively neutralizes these airborne microorganisms in the duct.

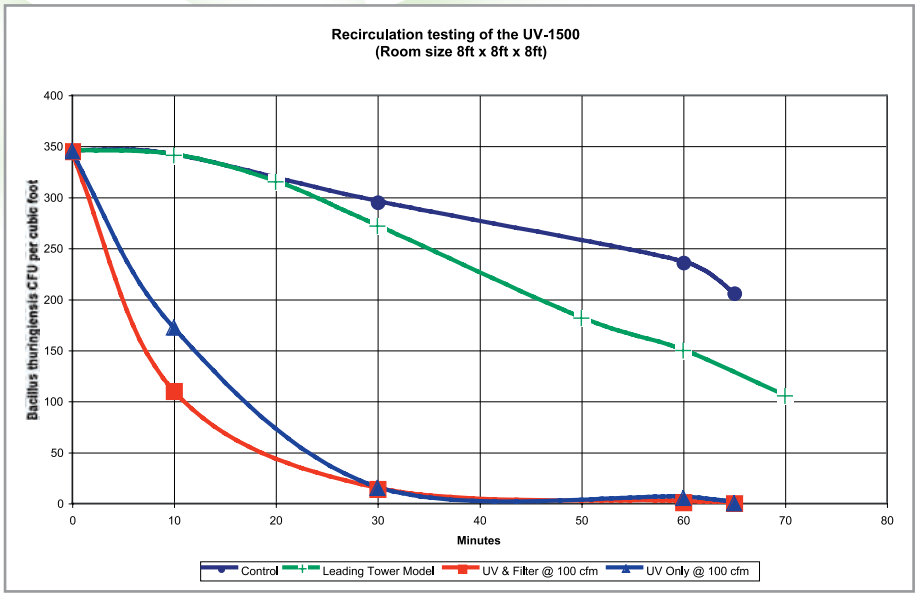
Since HVAC systems typically re-circulate the air 40-75 times per day, a multi-pass, cumulative test was also conducted. Results demonstrate that repeated, multipass exposure to UV light dramatically reduces the concentration of bacteria and viruses throughout the home.

## Single Pass Test: UV Deadly for Airborne Microbes

This study introduced a common bacterium into a galvanized air duct equipped with a UV light to determine how effective the lamp would be in reducing the bacteria with one exposure, or a "single pass". The tests were conducted at two speeds: 1125 cfm and 2250 cfm in an 18" x 18" duct. The UV lamp yielded at least a 90% reduction of the test bacteria with a single airflow pass at 1125 cfm and at least 71% reduction at 2250 cfm.

## Cumulative Test: Multiple Exposures Dramatically Improve IAQ

To further investigate the effectiveness of UV on indoor air quality, Microbe Management created a series of tests designed to measure the cumulative effect of UV in reducing airborne contaminants. The test was performed in a structure with two isolated 8' x 8' x 8' rooms where air could be sampled. In the control room, no UV was present, while the other room utilized a portable UV air purifier. According to Bernard Kane, Ph.D., of Microbe Management, "Test results were very encouraging. In both rooms, we introduced a resistant, spore-forming bacteria until the air was saturated with 350 colonies per cubic foot. In the room with the portable UV unit, the spore count was reduced by 50% in just 10 minutes and by 98% within 30 minutes. In the control room, without UV, more than 85% of the bacteria were still active after thirty minutes." Similarly, the leading consumer UV "tower" model was also tested, but showed only minimal effectiveness. (See chart below.)




## Conclusion: UV is an Effective Part of "Whole House" Solution

A-coil irradiation, single pass, and cumulative tests confirm that UV is an important and effective contributor to a healthier home environment. UV technology used with a quality filter (MERV rated 8 or higher) will dramatically improve Indoor Air Quality. Additionally, portable units can be used in combination with in-duct models. This combination is strongly recommended for individuals with depressed immune systems, asthma, allergies, or other respiratory conditions. For homes without forced-air, portable UV air purifiers are recommended to enhance IAQ. Also, health care professionals, teachers and day-care workers can benefit from additional UV protection from influenza and other viruses.

# UV-Aire® Portable Models

## For Ductless Systems and Extra Protection

We offer three portable UV-Aire® models that help keep the air fresh, clean and pure. All three models contain UVC germicidal light to zap airborne mold, dust mites, bacteria, and viruses. Each contains a high efficiency filter to trap dust, pollen, and pet dander and a charcoal filter to stop odors. The new Trio Portable also features our exclusive, patented PRO-Cell™…the most effective way to eliminate VOCs, odors, and smoke. The Trio also generates negative ions which promote mental clarity, reduce anxiety, and allow for more natural sleep.

The UV-Aire portables are ideal for homes without ductwork and for extra protection in bedrooms, nurseries, dormitories, and apartments.



UV-1500C

## UV-1500C Portable

For home or office up to 1,500 square feet. Traps dust and dander. Zaps germs and mold spores. Reduces odors. Can be installed in standard 2' x 2' ceiling grid. Plugs into any standard 120 volt outlet.

### Features

1. Recessed handle
2. Carbon filter
3. UVC germicidal lamp
4. Adjustable fan control
5. Visible and audible lamp condition alerts
6. Built-in heavy-duty fan
7. 12" x 12" high-efficiency/ carbon filter
8. Rubber feet


*Drop ceiling installation*

New!

Trio Portable
TRIO-1000P

## Trio-1000P Portable

The ultimate portable Healthy Home System™. For home or office. Zaps germs and mold. Traps dust and dander. Eliminates VOCs, odors, and smoke. Plugs into any standard 120 volt outlet.

### Features

1. First gas absorption layer
2. Second gas absorption layer
3. High efficiency, ultra quiet, variable speed fan
4. Hospital grade HEPA filter
5. High impact ABS plastic
6. PRO-Cell™ Photo-catalytic converter
7. High output UVC germicidal lamp
8. VOC sensor
9. Particle sensor



UV-500C

## UV-500C Portable

Ideal for the bedroom or small office. Traps dust, zaps germs, and reduces smoke just like its larger cousins. Plugs into any standard 120 volt outlet.

### Features

1. Built-in handles
2. 10"x10" high-efficiency/ carbon filter
3. UVC germicidal lamp
4. 3 speed fan control
5. Visible lamp and filter condition alerts
6. Heavy-duty fan
7. Rubber feet. 12" x 12" footprint.

# Residential Steam Humidifier

## The humidifier that works when you need it.

The Field Controls Residential Steam Humidifier operates when there is a call for humidity, not just when there is a call for heat. This means maximum comfort for the homeowner. It is also designed for optimum efficiency with an onboard system that automatically performs routine maintenance and monitors operations for maximum safety.


S2000

### Automatic Maintenance

The automatic flush system drains the humidifier every twenty-four hours of operation. This is a preventative maintenance mode that keeps the pan clean and the water fresh. Since the pan refills only when there is a call for humidity, the pan is empty during the summer months. This prevents stagnant water and the problems associated with other types of humidifiers. The S2000 can output up to 16 gallons of water per day and the S2020 can output up to 23 gallons per day.

### Information is Power

The S2000 and S2020 steam humidifiers have a built-in computer chip to ensure maximum efficiency, accuracy, reliability and safety. The easy to read LEDs on the unit communicate operation and trouble-shooting information.

MORE

### Features

- Interlocking wiring for fan control
- LEDs for system readout
- Replaceable sacrificial anode
- Optional water filter
- Copper heating element for improved durability

### Benefits

- Humidifies without a call for heat
- Compatible with all forced air heating systems
- Most effective cure for dry homes
- 100% guaranteed fresh water
- Water is allowed to cool before draining, reducing risk of scalding if servicing
- Reduced clogging because tank does not drain from the bottom
- Works with heat pumps and geothermal systems

# ThermoMist®

## Spray Atomizing Humidifier

The ThermoMist® whole house humidifier is ideal for use with conventional gas or oil forced-air central heating systems. It's fully adjustable and uses fresh water to automatically humidify up to 3,000 square feet. (5,000 sq. ft. with optional spray nozzle)


### Features

- For homes up to 5,000 square feet
- Adjustable
- Heat activated
- Versatile installation

## SmartExhaust™

### The Smart Switch for Smart Houses

The easiest, most cost efficient way to help make a home ASHRAE 62.2 compliant. The SmartExhaust turns the bathroom fan into an automatic exhaust system that helps eliminate stale air from the home.

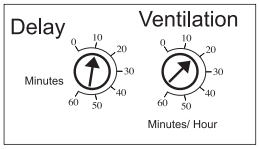

SmartExhaust™


### Features

- Makes standard bathroom fans ASHRAE 62.2 compliant
- Microprocessor technology provides precise ventilation times
- Fan runs every hour for set ventilation period
- Controls the fan and light...all in one switch
- Helps prevent mold and mildew
- Helps meet ventilation codes
- Part of the Healthy Home System™

### *How It Works*

*The SmartExhaust™ is set by the installer to automatically turn the fan on once per hour for a set amount of time (1-60 minutes). While running, the SmartExhaust is sending stale air outside. The stale air is replaced by fresh air via a Fresh Air System, a Make-Up Air System, or another inlet.*



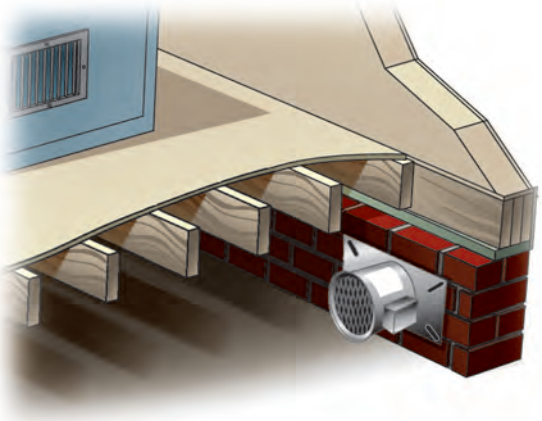

Example: 10 minute delay, 20 minutes per hour ventilation

## Eliminator® Foundation Vent Fan

### Eliminate moisture in crawl spaces

The Eliminator Foundation Vent Fan is a motorized fan designed to circulate fresh air in a home or building crawl space to eliminate cancer-causing radon gas and reduce moisture that can lead to mold formation and termite infestation. It is wired for automatic operation when the temperature exceeds 50° F. An optional de-humidistat activates the fan when humidity exceeds the owner-determined setting (20%–80%) in conjunction with the built-in temperature control.

EL-1



Installed behind existing vent

### Features

- Reduces moisture content and mold potential in crawl spaces, floor joists, flooring, and other support wood
- Circulates air in crawl space
- Removes radon gas
- Temperature or humidity activated
- Reduces potential for airborne mold infiltration into home
- Reduces termite potential

Optional De-Humidistat

*Note: The de-humidistat is designed to be installed remotely, so it can be placed in the crawl space where moisture is most likely to accumulate.*

MORE

# Models & Specifications

## FRESH

| Model | Product | Description | Voltage | Amps | Watts |
|---|---|---|---|---|---|
| FAS-6 | Healthy Home System™ Control | Fan/Vent ON and OFF delay settings, 1-199 minutes in 1 minute increments, unlimited setting for ON and OFF | 24 | 0.07 | – |
| | FAD Fresh Air Damper | Motorized, stainless steel, power open/close in 15 sec. increments, fits 6" duct or pipe | 24 | – | 3 |
| HHSC+ | Healthy Home System™ Control | Programmable control for central system fan | 24 | 0.07 | – |
| FAD-4 | Fresh Air Damper | Power open/close, fits 4" duct or pipe | 24 | – | 3 |
| FAD-6 | Fresh Air Damper | Power open/close, fits 6" duct or pipe | 24 | – | 3 |
| FAD-8 | Fresh Air Damper | Power open/close, fits 8" duct or pipe | 24 | – | 3 |
| FAD-10 | Fresh Air Damper | Power open/close, fits 10" duct or pipe | 24 | – | 3 |
| MAS-1 | Fresh Air/Make-Up Damper | Pressure activated, fits 6" duct or pipe | – | – | – |

## Recovery Ventilators

| Model | Product | Size (inches) | Airflow cfm | | | | | Effectiveness @ 32° F | Voltage | Amps | Hz | Watts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | .1 | .2 | .3 | .4 | .5 | | | | | |
| FC95HRV | Heat Recovery Ventilator | 24.5 H x 18.5 W x 16 D | 76 | 73 | 70 | 66 | 60 | 88% | 120 | 0.9 | 60 | 89 |
| FC155HRV | Heat Recovery Ventilator | 19 H x 33.62 W x 14.75 D | 144 | 134 | 125 | 113 | 92 | 73% | 120 | 1.4 | 60 | 119 |
| FC200HRV | Heat Recovery Ventilator | 19 H x 33.62 W x 14.75 D | 207 | 200 | 184 | 171 | 152 | 74% | 120 | 1.4 | 60 | 113 |
| FC150ERV | Energy Recovery Ventilator | 19 H x 33.5 W x 14.75 D | 151 | 141 | 132 | 124 | 107 | 81% | 120 | 1.4 | 60 | 95 |

## CLEAN

### Media Air Cleaners™

| Model | Rated Air Flow (cfm) | MERV Rating | Media Size (inches) |
|---|---|---|---|
| FC8-1625HS | 600 - 1,400 | 8 | 16 H x 25 W x 5 D |
| FC8-2025HS | 600 - 2,000 | 8 | 20 H x 25 W x 5 D |
| FC11-1625HS | 600 - 1,400 | 11 | 16 H x 25 W x 5 D |
| FC11-2020HS | 600 - 1,400 | 11 | 20 H x 20 W x 5 D |
| FC11-2025HS | 600 - 2,000 | 11 | 20 H x 25 W x 5 D |
| FC11-2016T3HS | 600 - 1,200 | 11 | 16 H x 25 W x 3 D |
| FCRA11-2025 | 600 - 2,000† | 11 | 20 H x 25 W x 5 D |

*† A second Media Air Cleaner may be required if CFM exceeds rated air flow. Refer to installation manual for more information.*

## PACKAGED SOLUTION

| Model | PRO-Cell™ Surface Area (sq. in.) | Sizing (tons) | Voltage | Lamp Wattage | MERV 13 Filter (inches) | MERV 13 Efficiency Particulate Reduction at .30 microns | Dimensions (inches) | Lamp Life Efficiency |
|---|---|---|---|---|---|---|---|---|
| Cube | 600 - 1,400 | 6.0 | 120 | 6 at 25 | 20 H x 25 W x 4 D | 92.30% | 23 H x 31 W x 29 D | 2 years |

MODELS

# Models & Specifications

## PURE

### UV-Aire® In-Duct Models

#### FlexMountUV™

| Model | Twin Tube Lamp Length (inches) | Voltage | Lamp Wattage | Lamp Intensity μW/cm² @ 1m | Sizing (tons) | Lamp Life Efficiency |
|---|---|---|---|---|---|---|
| UV-13FM* | 13 | 24 | 24 | 65 | 1.5 to 3.0 | 2 years |
| UV-17FM* | 17 | 24 | 36 | 110 | 1.5 to 5.0 | 2 years |

#### In-Duct

| Model | Minimum Duct Width (inches) | Voltage | Lamp Wattage | Lamp Intensity μW/cm² @ 1m | Sizing (tons) | Lamp Life Efficiency |
|---|---|---|---|---|---|---|
| UV-12 | 9 | 120 | 30 | 37 | 1.5 to 3.0 | 2 years |
| UV-18 | 14 | 120 | 30 | 73 | 1.5 to 5.0 | 2 years |
| UV-28 | 22 | 120 | 60 | 105 | 1.5 to 5.0 | 2 years |
| UV-12E | 9 | 120/240 | 30 | 37 | 1.5 to 3.0 | 2 years |
| UV-18E | 14 | 120/240 | 30 | 73 | 1.5 to 5.0 | 2 years |
| UV-28E | 22 | 120/240 | 60 | 105 | 1.5 to 5.0 | 2 years |
| UV-12HP | 9 | 240 | 30 | 37 | 1.5 to 3.0 | 2 years |
| UV-18HP | 14 | 240 | 30 | 73 | 1.5 to 5.0 | 2 years |
| UV-28HP | 22 | 240 | 60 | 105 | 1.5 to 5.0 | 2 years |
| UV-18X | 14 | 120 | 60 | 2 at 73 | 1.5 to 5.0 | 2 years |
| UV-16/120 | 16 | 120 | 30 | 62 | 1.5 to 5.0 | 2 years |
| UV-16/24 | 16 | 24 | 30 | 62 | 1.5 to 5.0 | 2 years |

**50VA Transformer required, ask for Part #46638900 TR50VA*

#### Healthy Home Duo

| Model | Sizing (tons) | Voltage | PRO-Cell™ Surface Area (sq. in.) | Lamp Life Efficiency | Lamp Wattage | Lamp Intensity (μW/cm²@1m) | Static Pressure Performance | Dimensions (inches) |
|---|---|---|---|---|---|---|---|---|
| Duo-2000 | 1.5 to 5.0 | 120/230 | 3,500 | 2 years | 50 | 135 | .02 in WC @ 2,000 cfm | 6 ½ H x 7 ⅝ W x 1 ⅞ D 17 ¾ (In Duct) |

COMING SOON! - 24 Volt Model

#### Healthy Home Trio

| Model | Sizing (tons) | Voltage | PRO-Cell™ Surface Area (sq. in.) | Lamp Life Efficiency | Lamp Wattage | Lamp Intensity (μW/cm²@1m) | Static Pressure Performance | MERV 13 Filter (inches) | MERV 13 Efficiency Particluate Reduction at .30 microns | Dimensions (inches) |
|---|---|---|---|---|---|---|---|---|---|---|
| Trio-1200 | 1.5 to 3.0 | 120 | 8,065 | 2 years | 2 at 25 | 2 at 70 | .30 in WC @ 1,200 cfm | 16 H x 25 W x 4 D | 92.30% | 17 H x 25 W x 10 D |
| Trio-2000 | 2.5 to 5.0 | 120 | 10,080 | 2 years | 2 at 25 | 2 at 70 | .32 in WC @ 1,600 cfm | 20 H x 25 W x 4 D | 92.30% | 21 H x 25 W x 10 D |

#### Portable Models

| Model | Sizing Sq. Ft. | Voltage | Lamp Life Efficiency | Lamp Wattage | Lamp Intensity μW/cm² @ 1m | Dimensions (inches) |
|---|---|---|---|---|---|---|
| UV-500C | 500 | 120 | 1 year | 10 | 24 | N/A |
| UV-1500C | 1,500 | 120 | 1 year | 30 | 37 | N/A |
| TRIO-1000P | 1,000 | 120 | 1 year | 10 | 45 | 18 H x 21.5 W x 8 D |

## MORE

### SmartExhaust™ & Eliminator Foundation Vent Fan

| Model | Product | Description | Voltage | Amps | Watts | Hz | Recommended Max. Sq. Ft. |
|---|---|---|---|---|---|---|---|
| SEC | SmartExhaust™ | Programmable control for exhaust fans | 120 | – | – | – | – |
| EL-1 | Eliminator® Foundation Vent Fan | Fits any crawl space vent | 120 | 0.6 | 35 | 60 | 1,000 |
| EDH-1 | De-Humidistat | De-Humidistat | 120 | 12 | – | – | – |

### Residential Steam Humidifier

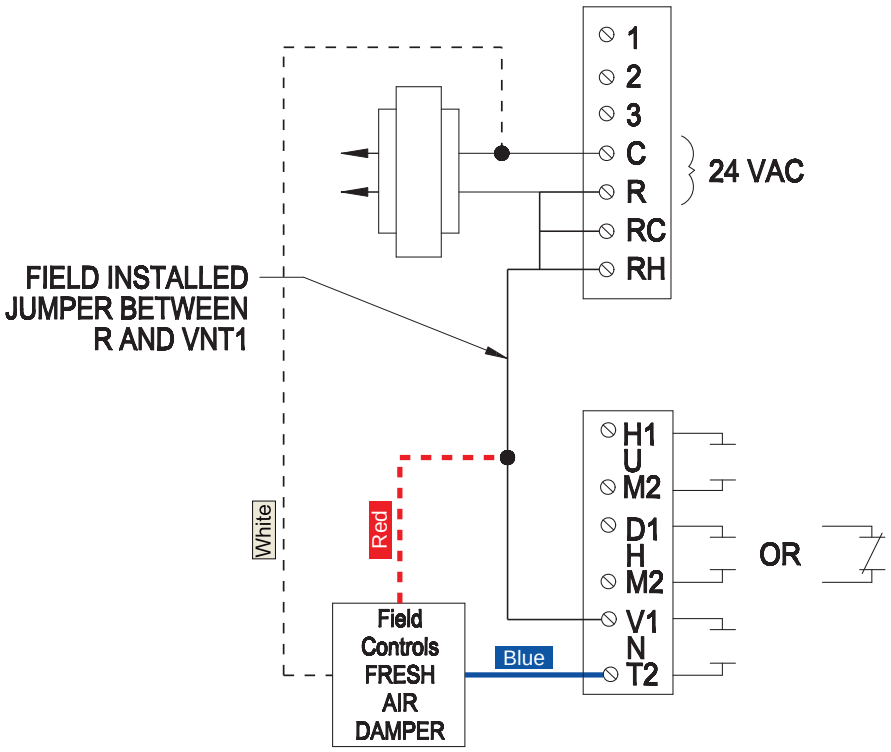
| Model | Output Capacity | Max coverage area Sq. Ft. | Voltage | Watts | Amps | Hz | Plenum Opening (inches) | Weight Lbs. | Humidistat Included |
|---|---|---|---|---|---|---|---|---|---|
| S2000 | 16 Gal./Day | 2,400 | 120 VAC | 1.4 | 11.6 | – | 6 x 6 | 9 | Yes |
| S2020 | 23 Gal./Day | 3,200 | 220 VAC | 2.0 | 8.5 | – | 6 x 6 | 9 | Yes |
| TM2000 | 9 Gal./Day | 3,000 (5,000 sq. ft. with optional spray nozzle) | 24 VAC | 2.0 | 0.40 | 60 | – | 2 | No |

MODELS

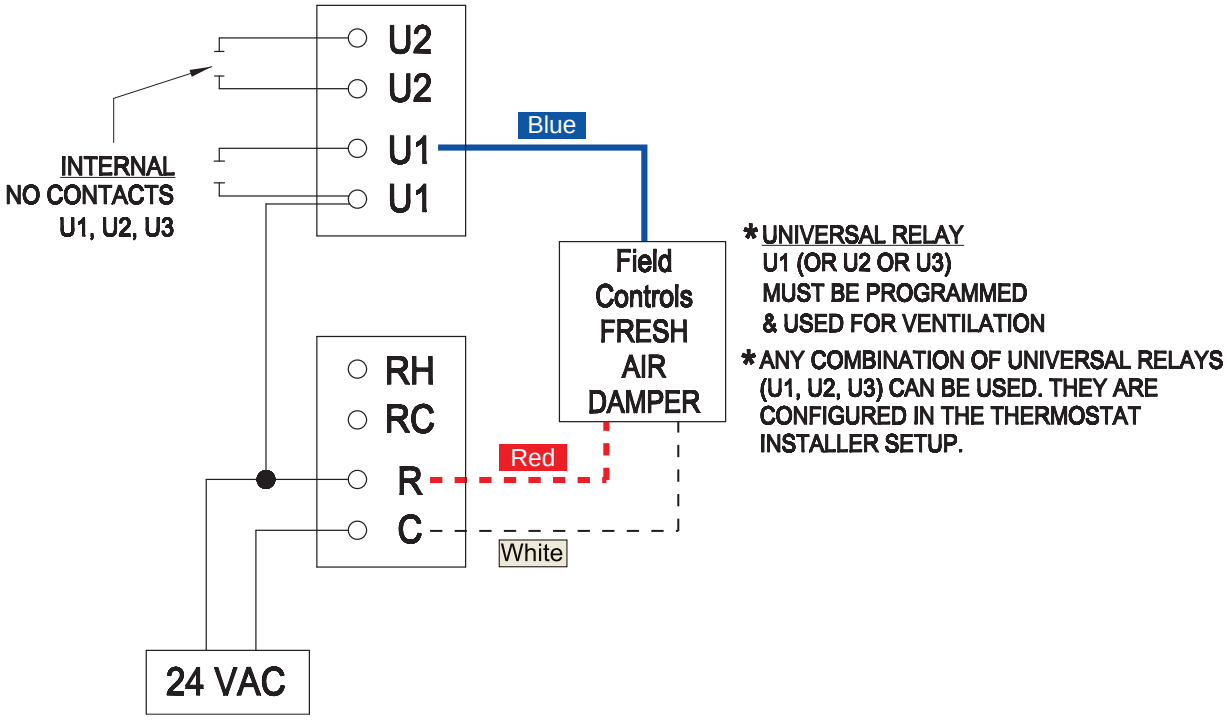
# Wiring Diagrams

for FAS

## FAD to Honeywell® VisionPro® Total Home Comfort System



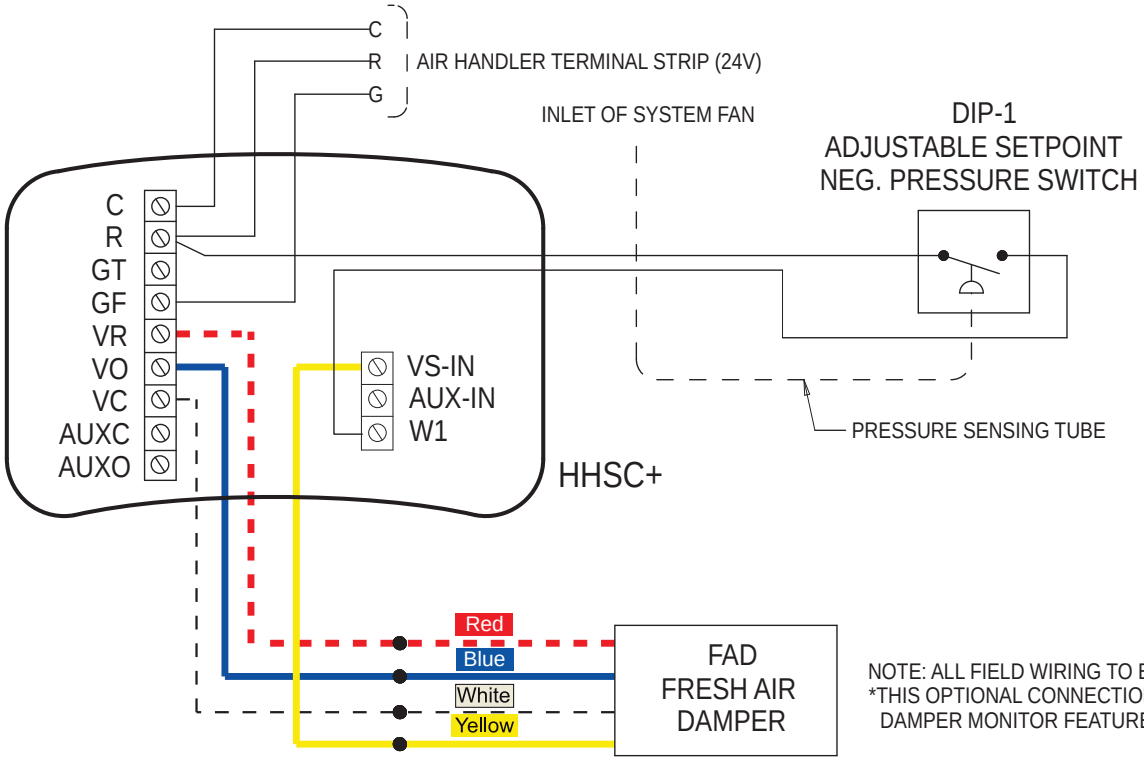

## FAD to Honeywell® THX9321/9421 Prestige IAQ and RF EIM




WIRING

## FAD to Carrier Infinity® System or similar with communicating thermostat and variable speed motor

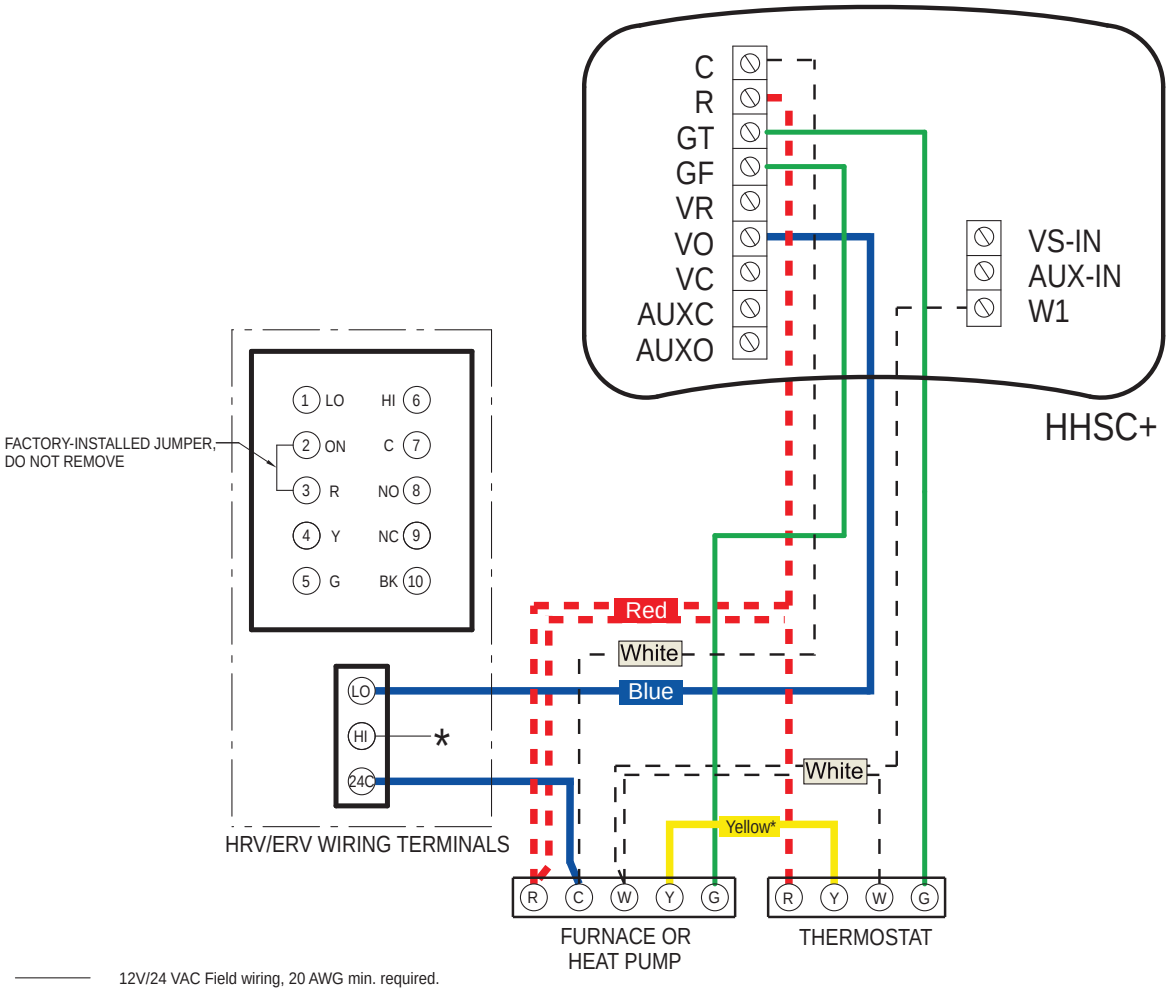
Other compatible systems:
*Bryant® Evolution®, Heil® Observer™ Systems, Tempstar®, Comfortmaker®, Arco Aire®.*




NOTE: ALL FIELD WIRING TO BE 24V 18-22 AWG
*THIS OPTIONAL CONNECTION ENABLES DAMPER MONITOR FEATURE

WIRING

## HHSC+ to Energy Recover Ventilator (ERV) and Heat Recovery Ventilator (HRV)

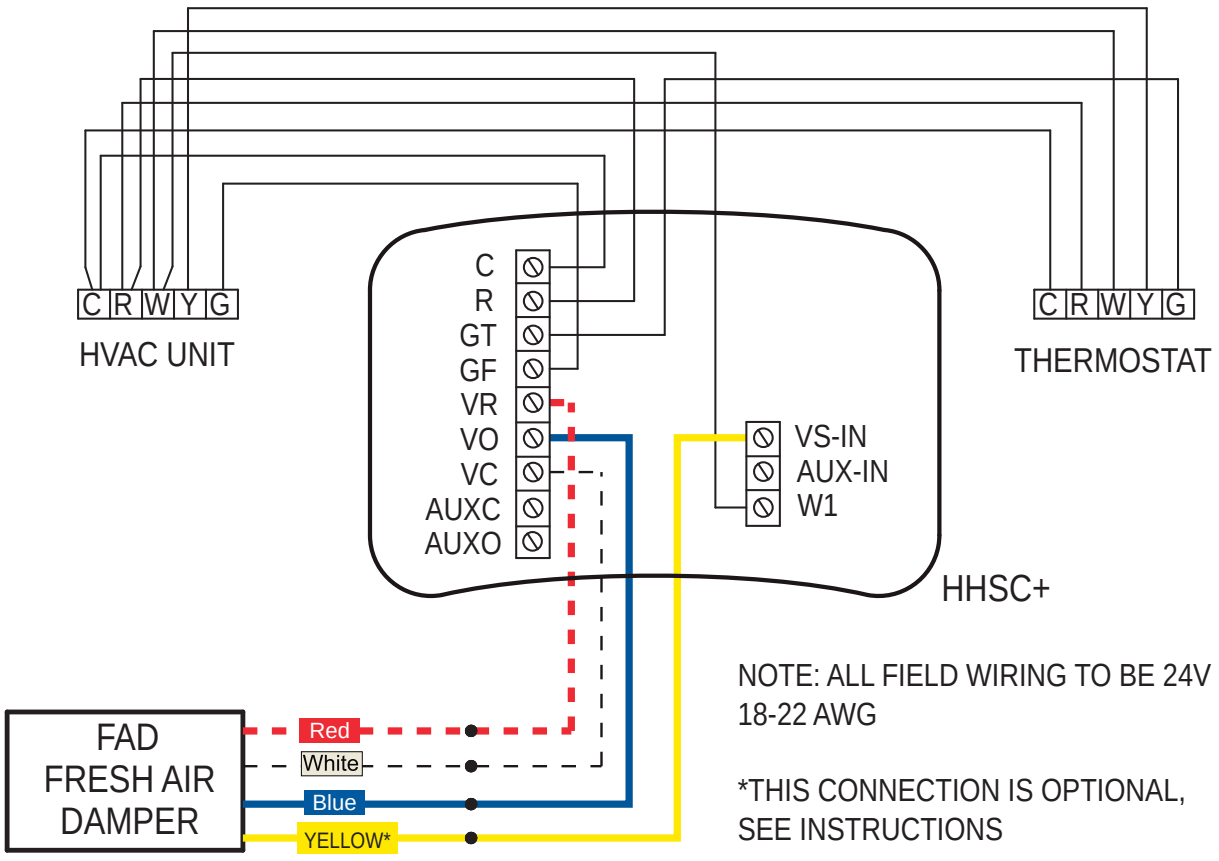



12V/24 VAC Field wiring, 20 AWG min. required.

* V Terminal on the HHSC Control may be connected to the Hi Terminal (instead of Lo) if shorter ventilation periods are desired.

WIRING

## FAD-4, 5, 6, 7, 8, 10 to HHSC+




NOTE: ALL FIELD WIRING TO BE 24V 18-22 AWG

*THIS CONNECTION IS OPTIONAL, SEE INSTRUCTIONS

WIRING

# Replacement Parts
## IAQ SYSTEMS

### UV-AIRE® AIR PURIFICATION BALLAST

| MODEL | REF. | DESCRIPTION | PART NO. |
|---|---|---|---|
| UV-12 | A | Ballast Assembly | 46365508 |
| UV-18 | A | Ballast Assembly | 46365509 |
| UV-28 | A | Ballast Assembly | 46365513 |
| UV-18X | A | Ballast Assembly | 46365503 |
| UV-E | A | Ballast Assembly | 46365506 |
| UV-C/HPC | A | Ballast Assembly | 46365510 |
| UV-HP | A | Ballast Assembly | 46365513 |
| UV-1500C | A | Ballast Assembly | 46365514 |
| UV-C | B | Circuit Board | 46436300 |
| UV-16/24 | C | UV-16/24 Transformer | 46529500 |
| UV-13FM | D | Ballast Assembly | 46635900 |
| UV-17FM | D | Ballast Assembly | 46635900 |

### UV-AIRE® AIR PURIFICATION LAMPS

| MODEL | REF. | DESCRIPTION | PART NO. |
|---|---|---|---|
| UV-12, UV-1500C | E | UVC Germicidal Lamp 12" | 46365401 |
| UV-16/120, UV-16/24 | E | UVC Germicidal Lamp 16" | 46511200 |
| UV-18 | E | UVC Germicidal Lamp 18" | 46365402 |
| UV-28 | E | UVC Germicidal Lamp 28" | 46365403 |
| UV-500C | E | UVC Germicidal Lamp 8" | 46508000 |
| TRIO-1000P | K | UVC Germicidal Lamp 11" | 46649700 |
| UV-13FM | E | UVC Germicidal Lamp 13" | 46632513 |
| UV-17FM | E | UVC Germicidal Lamp 17" | 46632517 |

### PORTABLE UV-AIRE® REPLACEMENT KITS

| MODEL | REF. | DESCRIPTION | PART NO. |
|---|---|---|---|
| UV-1500RK | F | Annual Replacement Kit | 46453600 |
| UV-500RK | G | Annual Replacement Kit | 46474500 |
| UV-1500RF | H | 4 Pack Filter Kit | 46508300 |
| UV-500RF | I | 4 Pack Filter Kit | 46507900 |
| TRIO-1000P | J | Replacement Filter Set | 46649600 |
| TRIO-1000P | L | Stage 1 Pre-Filter | 46649800 |
| TRIO-1000P | M | Stage 2 HEPA Filter | 46649900 |
| TRIO-1000P | N | UVC 11" Germicdal Lamp & Filter Set | 46650100 |

A

B

C

D

E

F

G

H

I

J

K

L

M

N


PARTS

## MEDIA AIR CLEANER™ REPLACEMENT KITS

### Field Controls

| MODEL | REF. | MERV | DESCRIPTION | SIZE (inches) | PART NO. |
|---|---|---|---|---|---|
| FCRM8-1625 | A | 8 | Replacement Media - 3 Pack Filter Kit | 16 x 25 x 5 | 46585900 |
| FCRM8-2025 | A | 8 | Replacement Media - 3 Pack Filter Kit | 20 x 25 x 5 | 46586000 |
| FCRM11-1625 | A | 11 | Replacement Media - 3 Pack Filter Kit | 16 x 25 x 5 | 46568500 |
| FCRM11-2020 | A | 11 | Replacement Media - 3 Pack Filter Kit | 20 x 20 x 5 | 46607000 |
| FCRM11-2025 | A | 11 | Replacement Media - 3 Pack Filter Kit | 20 x 25 x 5 | 46568600 |
| FCRM11-1625/3ABC | A | 11 | Replacement Media for Trion Air Bear Cub - 3 Pack Filter Kit | 16 x 25 x 3 | 46656600 |
| **Honeywell™** | | | | | |
| FCRM11-2025/4HW | B | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 20 x 25 x 4 | 46656700 |
| FCRM11-1625/4HW | B | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 16 x 25 x 4 | 46656800 |
| FCRM11-2020/4HW | B | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 20 x 20 x 4 | 46656900 |
| FCRM11-1620/4HW | B | 11 | Replacement Media for Honeywell 3 Pack Filter Kit | 16 x 20 x 4 | 46657000 |

A

B

## FLEXFILTER® MANUFACTURER BRAND & MODEL APPLICATION CHART

| MODEL | REF. | MERV | FITS MANUFACTURER & MODELS | SIZE (inches) | PART NO. |
|---|---|---|---|---|---|
| FLEX-1 | C | 11 | 6 Pack Filter Kit for: Field Controls, GeneralAire, Trion, Skuttle, Ultravation | 16 x 20 x 5 or 20 x 20 x 5 | 46600407 |
| FLEX-2 | C | 11 | 6 Pack Filter Kit for: Field Controls, GeneralAire, Trion, Skuttle, Ultravation | 16 x 25 X 5 or 20 x 25 x 5 | 46600401 |
| FLEX-3 | D | 11 | 6 Pack Filter Kit for: Honeywell F200E1003, F200E1029, F100F2028, F100F2036 | 16 x 20 x 4 or 20 x 20 x 4 | 46600406 |
| FLEX-4 | D | 11 | 6 Pack Filter Kit for: Honeywell F200E1011, F200E1037, F100F2002, F100F2010, F100F2044<br>6 Pack Filter Kit for: Carrier/ Bryant EZXCAB1016, EZXCAB1020 | 16 x 25 x 4 or 20 x 25 x 4 | 46600405 |
| FLEX-5 | E | 11 | 6 Pack Filter Kit for: Aprilaire 201, 210, 213 | 20 x 25 x 4 | 46600402 |
| FLEX-6 | E | 11 | 6 Pack Filter Kit for: Aprilaire 310, 313 | 19 x 20 x 4 | 46600403 |
| FLEX-7 | E | 11 | 6 Pack Filter Kit for: Aprilaire 401, 410, 413 | 16 x 28 x 4 | 46600404 |


C D E

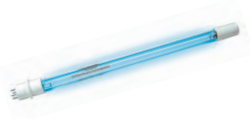
PARTS

# Replacement Parts

| HEALTHY HOME DUO | | | |
|---|---|---|---|
| MODEL | REF. | DESCRIPTION | PART NO. |
| 17.5LAMP | A | 50w 18" Germicidal Replacement Lamp | 46636300 |
| BL013 | B | High Output Temp. Compensating Ballast | 46637100 |

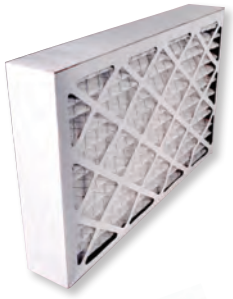
| HEALTHY HOME TRIO | | | |
|---|---|---|---|
| MODEL | REF. | DESCRIPTION | PART NO. |
| TrioRM8-1625 | C | 16" x 25" x 4" (3.75") MERV 8 Replacement Media for Trio 1200, 6 Pack Filter Kit | 46678400 |
| TrioRM11-1625 | C | 16" x 25" x 4" (3.75") MERV 11 Replacement Media for Trio 1200, 6 Pack Filter Kit | 46636800 |
| TrioRM13-1625 | C | 16" x 25" x 4" (3.75") MERV 13 Replacement Media for Trio 1200, 6 Pack Filter Kit | 46636600 |
| TrioRM8-2025 | C | 20" x 25" x 4" (3.75") MERV 8 Replacement Media for Trio 2000, 6 Pack Filter Kit | 46678300 |
| TrioRM11-2025 | C | 20" x 25" x 4" (3.75") MERV 11 Replacement Media for Trio 2000, 6 Pack Filter Kit | 46636700 |
| TrioRM13-2025 | C | 20" x 25" x 4" (3.75") MERV 13 Replacement Media for Trio 2000, 6 Pack Filter Kit | 46636500 |
| 22LAMP | D | 28w 22" Germicidal Replacement Lamps (two required) | 46636400 |
| BL014 | E | Electronic Ballast | 46636900 |
| BL007 | F | 12 Volt Transformer | 46637000 |
| AL004 | G | Ti02 Anatase PCO Honeycomb Catalyst for Trio 1200 | 46638300 |
| AL006 | G | Ti02 Anatase PCO Honeycomb Catalyst for Trio 2000 | 46638400 |

A



B

C

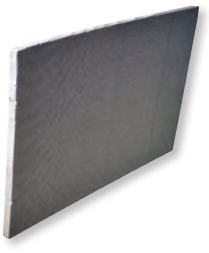


D

E

F

G



PARTS

| STEAM HUMIDIFIERS | | | |
|---|---|---|---|
| MODEL | REF. | DESCRIPTION | PART NO. |
| 2120 | A | 120 Volt Heater Assembly (for Model S2000) | 094021A0201 |
| 2240 | A | 240 Volt Heater Assembly (for Model S2020) | 094021A0202 |
| 2001 | B | 24 Volt Solenoid Valve Assembly | 094021A0203 |
| 2002 | C | Thermistor Probe Assembly | 094021A0205 |
| 2003 | D | Water Level Probe Assembly | 094021A0204 |
| 2010 | E | 120V Circuit Board Assembly (for Model S2000) | 094021A0206 |
| 2011 | E | 200V Circuit Board Assembly (for Model S2020) | 094021A0207 |
| 2006 | F | Drain Valve Assembly | 094021A0208 |
| 2007 | G | Tank Baffle | 094021A0209 |
| 2008 | H | Insulation Kit | 094021A0210 |
| WH-100 | I | Water Hammer Arrester | 090478A0001 |
| Z-100 | J | Anode | 090421A0211 |
| 2009 | K | Under Duct Tank Enclosure | 090421A0156 |
| APD | L | Air Proving Device | 090558A0001 |
| WC-25 | M | Steam Treat Water Filter Cartridge | 094021A1122 |
| DHS | – | Drain Hose Kit | 094024A0001 |

A 

B 

C 

D 

E 

F 

G 

H 

I 

J 

K 

L 

M 


PARTS

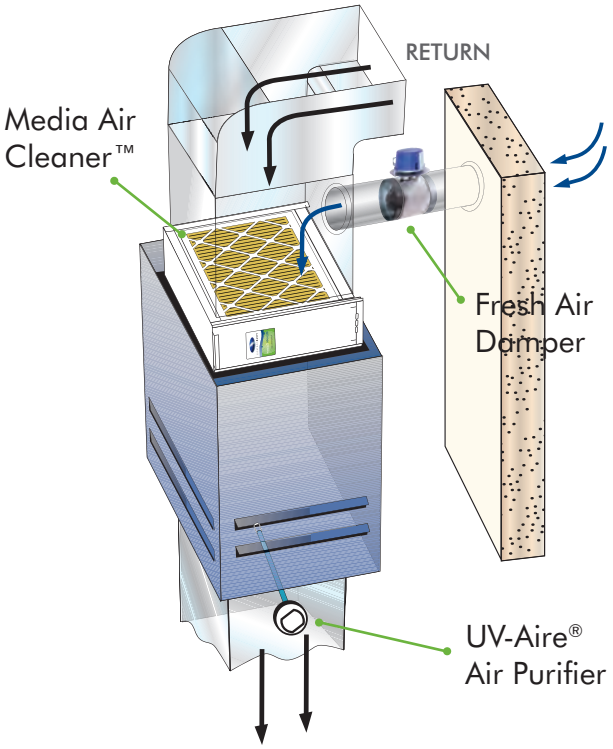
# Installation Options

## HEALTHY HOME SYSTEM™

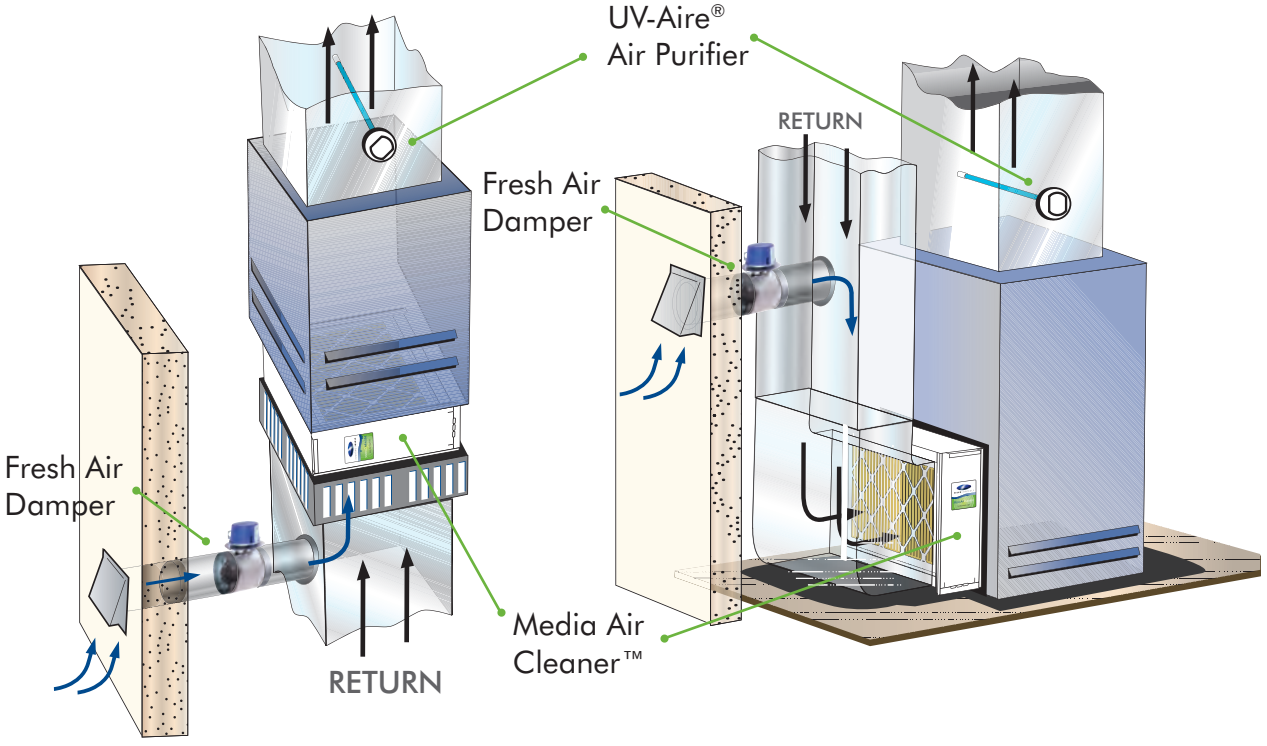
The Healthy Home System works in perfect harmony with virtually ANY forced air heating and cooling system. The Fresh Air Damper connects the outside to the system via the return duct, the Media Air Cleaner is installed before the air handler, and the UV-Aire is installed after or above the A-coil.

The illustrations show typical component placement in the most popular types of forced air systems.

*For illustration only. For detailed installation instructions, refer to the Installation Manual for each component. Manuals are available online at www.fieldcontrols.com/manuals-diagrams.*

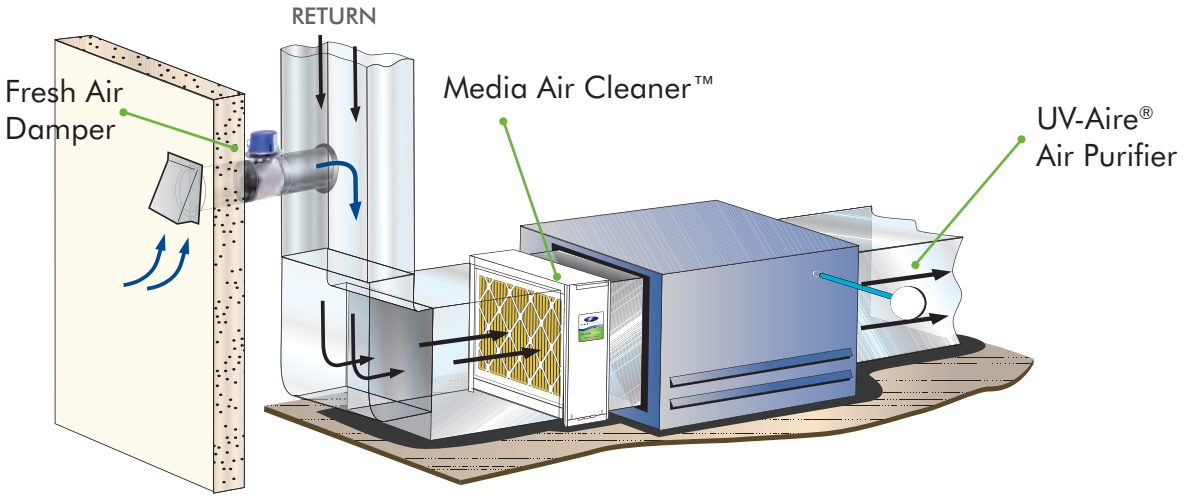



### DOWNFLOW

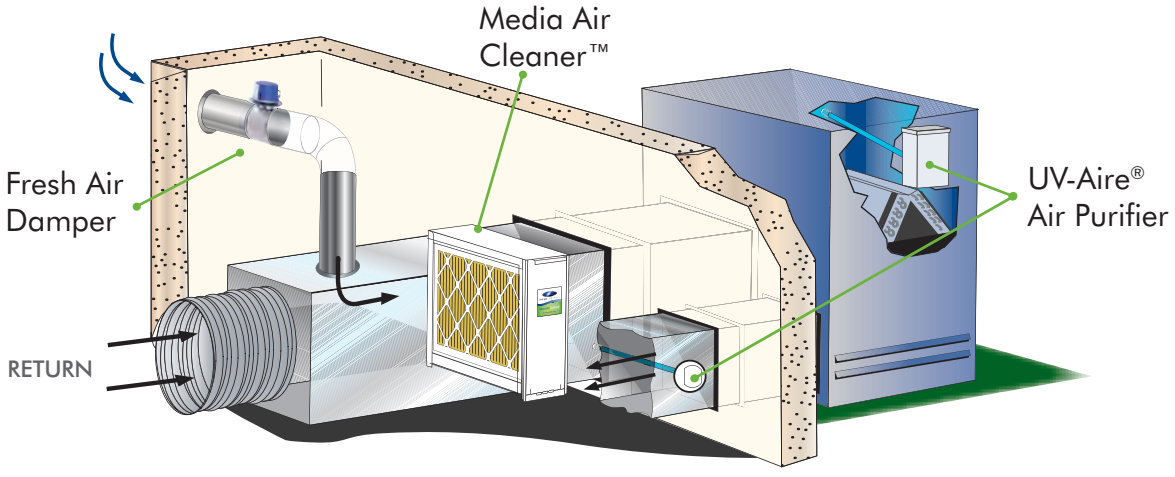



### UPFLOW

INSTALLATION




## HORIZONTAL

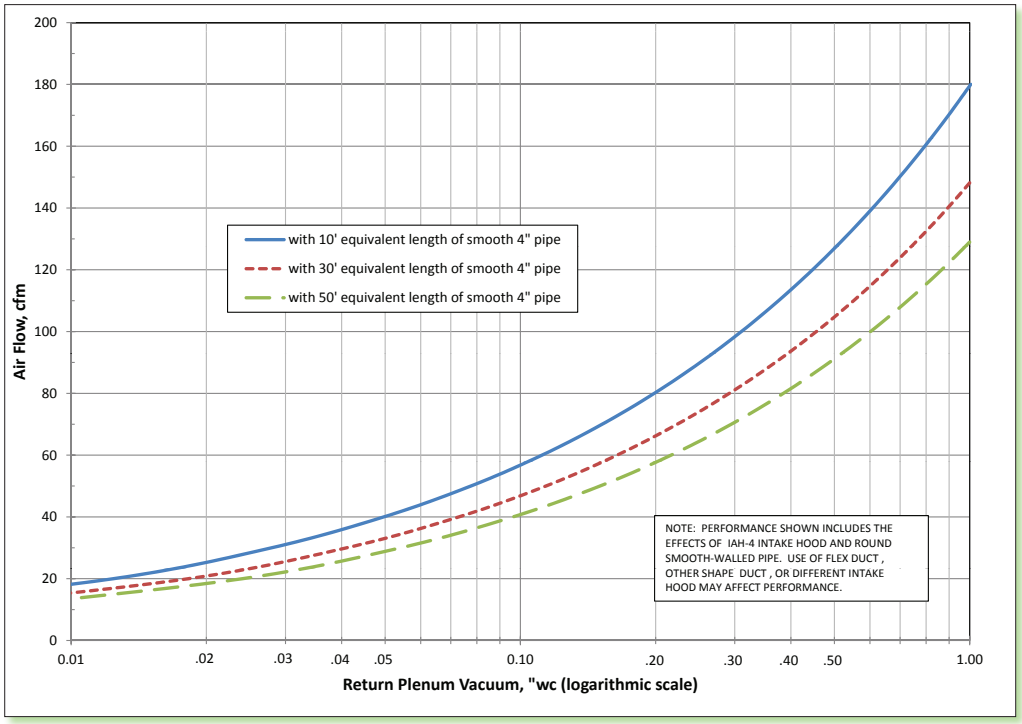



## EXTERNAL HEAT PUMP or GAS PACK

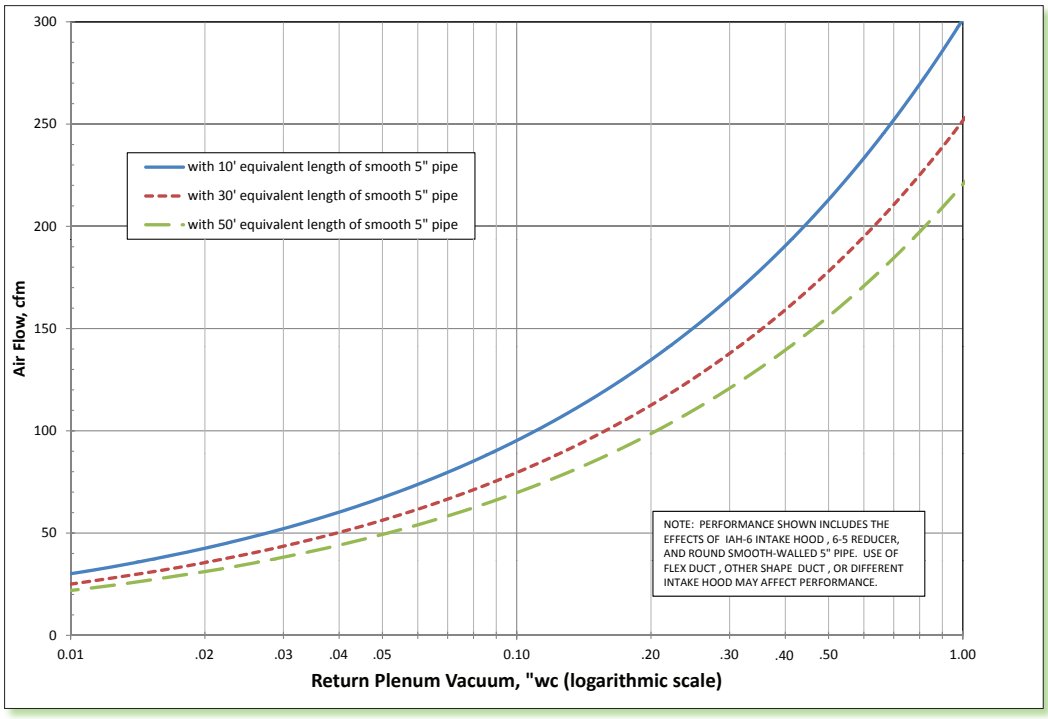
# Performance Charts

## FRESH AIR SYSTEM™

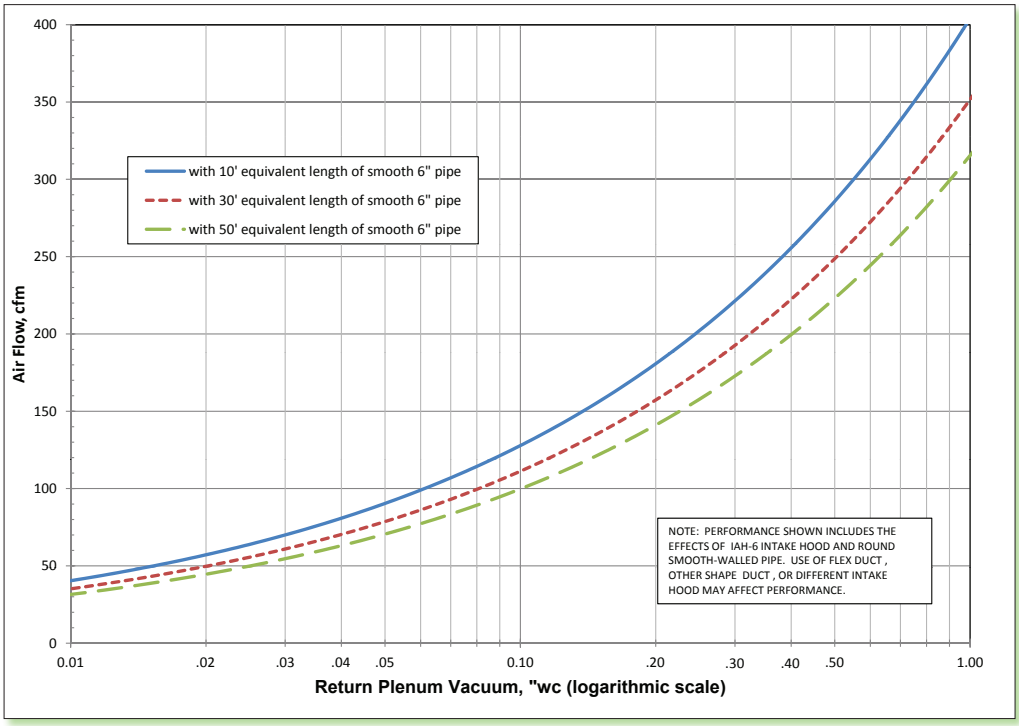
### FAS-4 Performance: IAH-4 Intake Air Hood, FAD-4 Damper, and 4" Duct



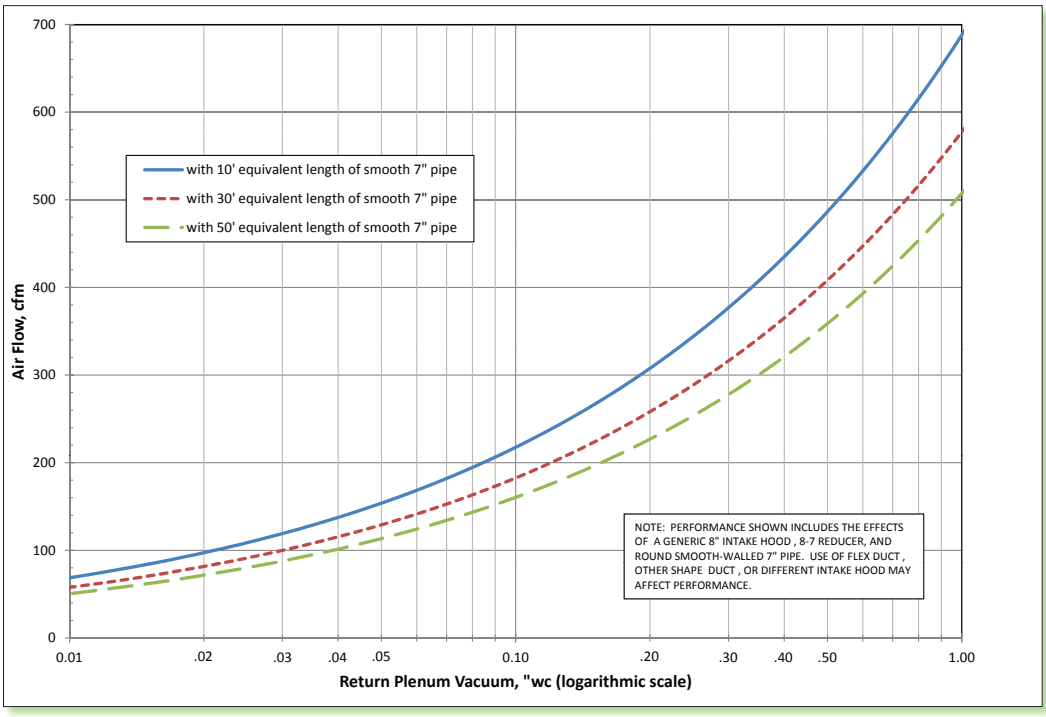

### FAS-5 Performance: IAH-6 Intake Air Hood, 6-5 Reducer, FAD-5 Damper, and 5" Duct



## FAS-6 Performance: IAH-6 Intake Air Hood, FAD-6 Damper, and 6" Duct



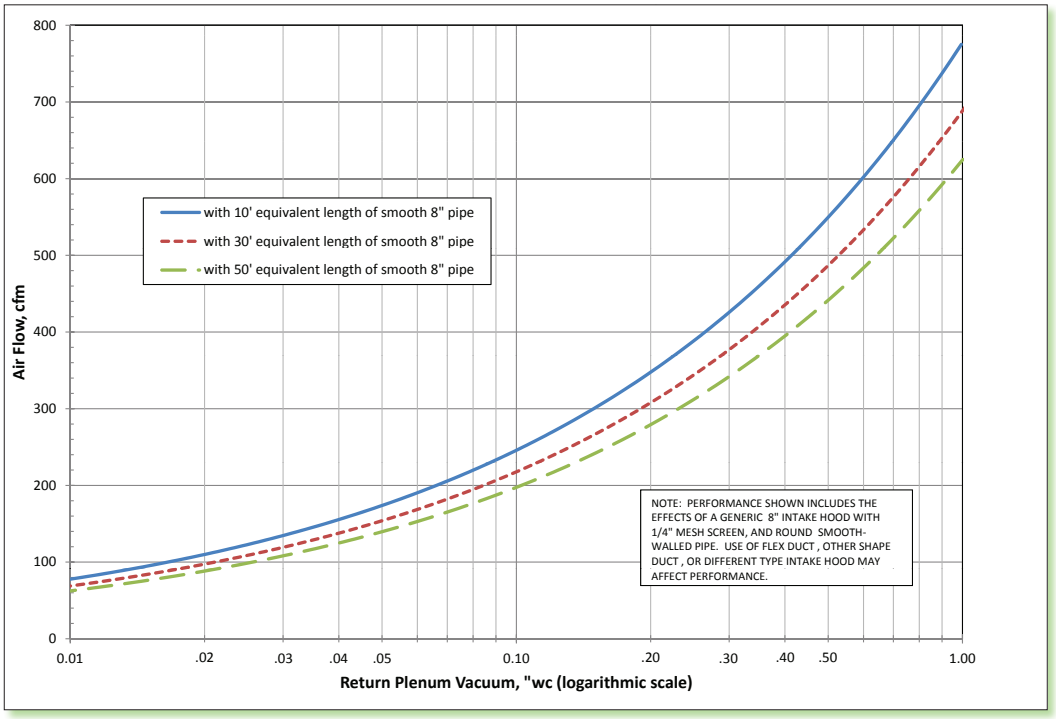

## FAS-7 Performance: Generic 8" Intake Air Hood, 8-7 Reducer, FAD-7 Damper, and 7" Duct



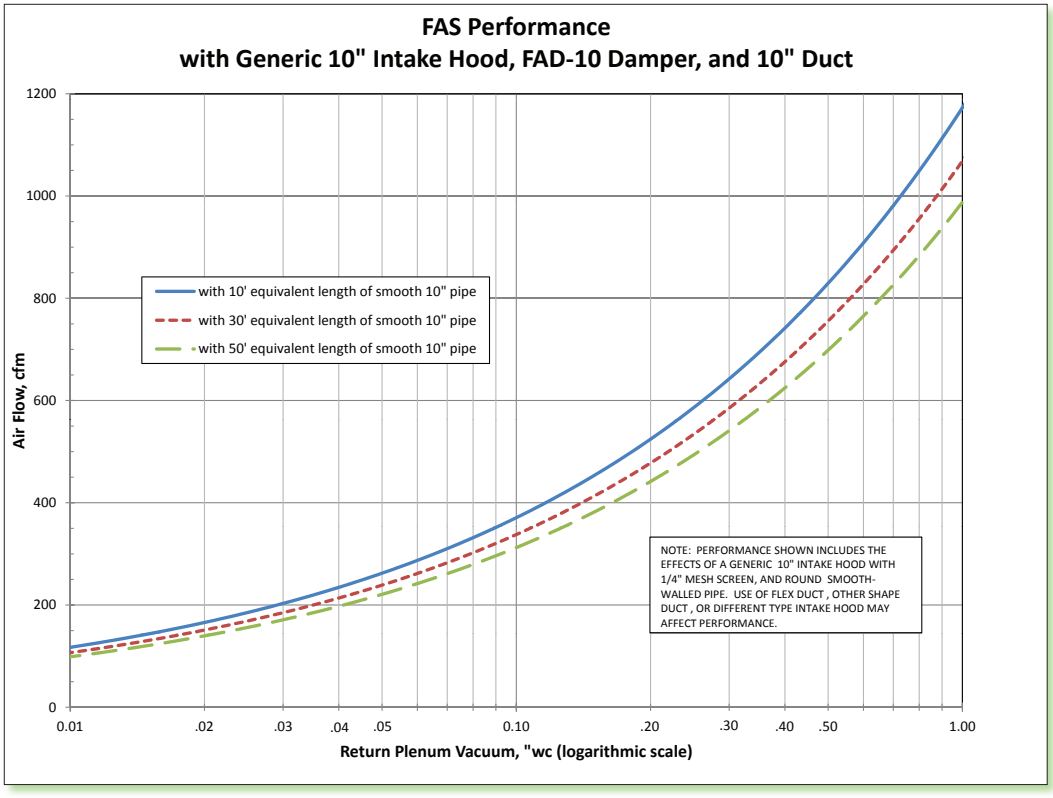
# Performance Charts

## FRESH AIR SYSTEM™

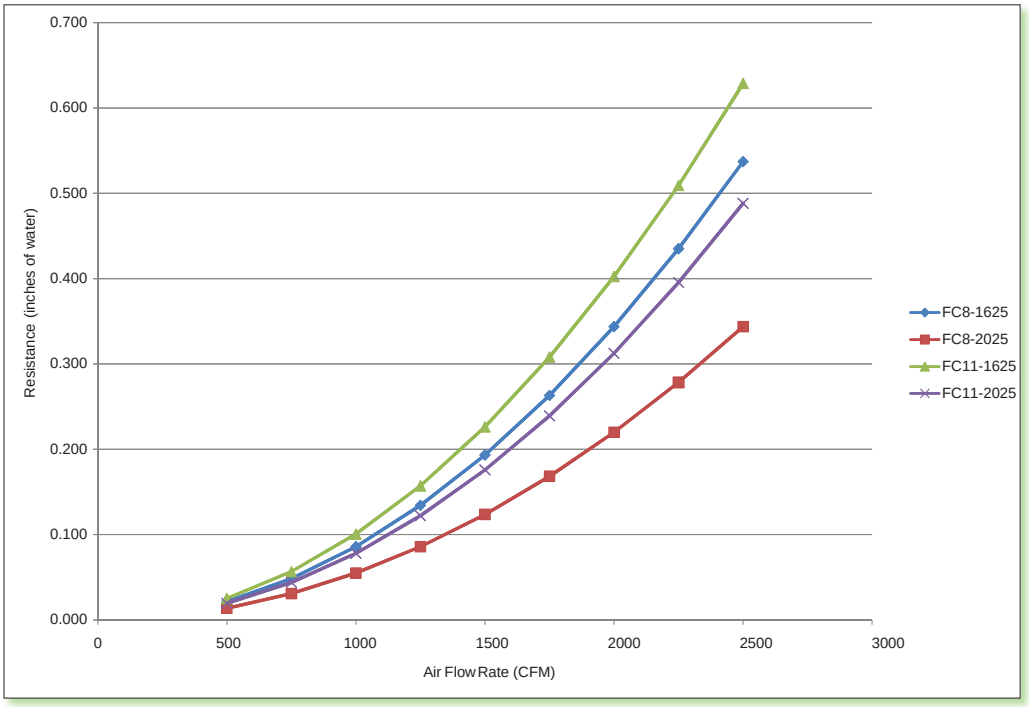
### FAS-8 Performance: Generic 8" Intake Air Hood, FAD-8 Damper, and 8" Duct




### FAS-10 Performance: Generic 10" Intake Air Hood, FAD-10 Damper, and 10" Duct



## MAC Performance: Air Flow vs. Resistance



# Notes

# *Ask about our other Reference Guides & Selling Tools*

## *Healthy Home iAQ App*

*The Ultimate Selling System for the Ultimate IAQ System!*

Available for Apple and Android smartphones and tablets, the Healthy Home iAQ app is a powerful, versatile new tool for the contractor.


## *Commercial Air Quality Guide*

Includes our comprehensive, state-of-the-art system, that is customizable and scalable for new and retrofit HVAC installations. Packaged modular solutions, customizable panels for virtually any commercial application.

## *Residential Ventilation Guide*

This guide will introduce you to our full line of ventilation options available to home builders and HVAC contractors. It provides reliable, practical, and proven ventilation that meets codes and satisfies homeowners' expectations for comfort, safety, and energy efficiency. It includes models, specifications, wiring diagrams, and much more.

## *Contractor Reference Guide*

For the latest in venting, combustion, and draft control, ask for the Field Contractor Reference Guide. Your guide for product information, specifications, installation, wiring, and replacement parts.

## *Healthy Hearth Guide*

A hearth needs to be healthy, too! For products that improve efficiency, save fuel, and add to the aesthetic value of your hearth, ask for the all new Healthy Hearth Guide.

FIELD CONTROLS

fieldcontrols.com