

# Ventilation Solutions

IAQ | Canada



# Indoor Air Quality

## Keep your family safe



### What's All The Talk About Indoor Air Quality?

You've heard it on TV and read about it in magazines. The news is everywhere ... the air inside your home can be up to five times more polluted than the air outside.

Since the 1970s, when we started building tighter energy-efficient homes, the level of indoor air pollutants has steadily increased.

Why? Contaminated air which once escaped through cracks around windows and doors is now trapped inside with you and your family.

### What The Experts Say:

In a survey conducted by the American Lung Association – 50% of the people surveyed were not aware that poor indoor air quality is one of the top five most urgent environmental risks to public health.

- American Lung Association

Proper ventilation will always make a positive contribution to indoor air quality aiding in the control of contaminants including moisture and mold.

- Home Ventilating Institute

Indoor air quality is important to human health because we spend over 80% of our time indoors. Tight insulation, too much humidity and other factors can lead to unhealthy air in your home or workplace, causing a number of health problems.

- Health Canada

Improving ventilation and airflow is basic to air quality, especially if your home is new or recently remodeled.

- Mayo Clinic

# Safeguard Your Home

## Three easy steps

“Your home should be safe and comforting, not a place that makes you sick. People can have air quality problems in any kind of home, new or old. The good news is that that you can do something right now to improve your home’s air quality.” – The Lung Association of Canada.

Asthma affects over 20 million people in North America including 6.3 million children.

### Step 1

#### Toxic Clean Up

Once you become aware of the possible pollutants in your home, you can take the first step to improving the quality of the air you breathe just by eliminating many of the irritants. Different types of pollutants that might be found in your home include.

#### Biological Contaminants

#### Chemical Contaminants

#### Combustion Sources

#### Building Materials

- Don’t smoke indoors
- Limit chemicals used for cleaning purposes
- Wash bedding/linens in hot water to kill dust mites
- Keep pets outside



### Step 2

#### Better Ventilation

Improve indoor air quality with better ventilation in the areas of the home where moisture, smoke or steam occur.

#### Bathrooms • Kitchens • Laundry Rooms with Fireplaces

Today’s energy efficient construction methods make homes so tight that mechanical ventilation is needed to remove contaminants which cause mold, mildew or poor air quality.

An energy saving Fantech Heat Recovery Ventilator is an ideal choice to bring a continuous supply of fresh, filtered air into your home while expelling stale air.



### Step 3

#### Clean and Filter The Air

The third step to better indoor air quality is to filter the air.

Fantech’s Whole House HEPA Filtration unit is one way you can do just that. This small, compact unit is designed to clean the total volume of air in an average size house once an hour. Mold spores, pet dander, cooking odors, dust, dust mites and their by-products are all captured in a series of three filters.

Fantech’s HEPA Filtration System easily installs on the existing ductwork of your forced air furnace/ air handler or can be used as an independent system mounted in the attic, crawl space or closet.



# Heat Recovery Ventilators

## The basic

### Did You Know?

Studies have found that simple things like mopping the kitchen floor, taking a shower, doing the laundry or just breathing can generate enough moisture in your home to raise the relative humidity to an unhealthy level.

Increased humidity and moisture inside your home can lead to severe structural damage that you can't see until it's too late. Increased moisture levels can also dramatically affect your family's health due to increased mold and mildew.

### What are HRVs

To better understand these products and their function, here are a few things to remember.

Heat Recovery Ventilators are recommended for colder areas of the country that have longer heating seasons.

Heat Recovery Ventilators are complete whole house ventilation systems that incorporate a supply motor and an exhaust motor in one unit. The supply motor draws fresh air in from the outside and the exhaust motor pushes stale contaminated air out. The two air streams are separated by a heat recovery core which tempers the air making it the most comfortable solution for a healthy indoor environment.

For information on how these units can help you save energy and lower heating or cooling costs, read "How Do They Work?".

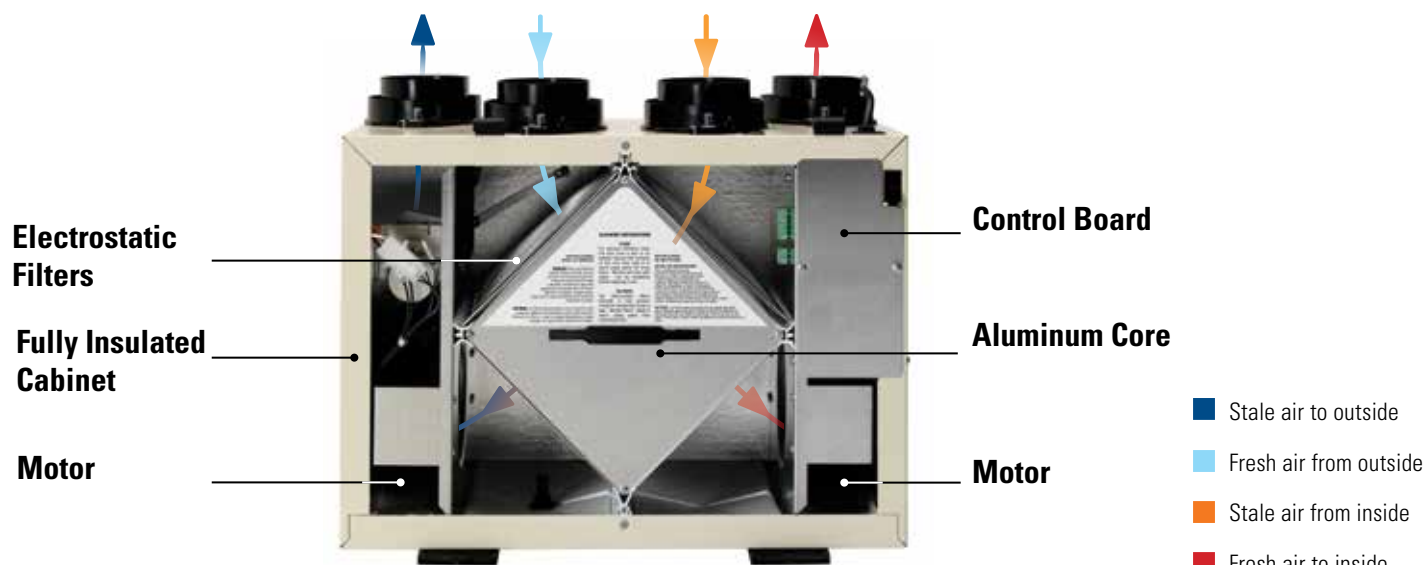
### Benefits of a Heat Recovery Ventilator

- Brings a continuous supply of fresh, filtered outside air into the home
- Exhausts environmental contaminants for improved indoor air quality
- Saves energy by recovering heat from exhaust air in the winter
- Cools incoming air in the summer when the house air is cooler than the outdoor air
- Controls excess humidity in cooler seasons by introducing outdoor air into the house



# Heat Recovery Ventilators

## Features



### How Do They Work?

An HRV is designed to bring a continuous supply of fresh air into a home while exhausting an equal amount of contaminated air. HRVs use what is called a heat recovery core.

This special aluminum core transfers heat from the exhaust air stream to the incoming air stream. Fresh incoming air is tempered by the heat that is transferred from the outgoing air so you save on energy costs. Fantech HRVs are equipped with automatic defrost mechanisms so even if you live in the cold climates you can use your HRV all year long.

### Heat Recovery Ventilators : Defrost Methods

Defrost by air recirculation for a higher efficiency at low temperature. Doesn't cause depressurization of the building, the unit uses indoor air to defrost the core and prevent freezing.

Defrost by exhaust takes the air from the inside to defrost the core and expels indoor air for a very short period to a predetermined temperature to prevent freezing of the core.

This method never interrupts ventilation since the exhaust fan remains on while the supply fan is momentarily shut-off.

### Features in all Models

#### Aluminum Core

The high quality aluminum core used in Fantech HRVs offers efficient heat transfer, improved defrost characteristics and ease of maintenance. Lifetime warranty.

#### Washable Electrostatic Filters

The filters don't need to be replaced.

#### Fully Insulated Cabinet

Powder-coated galvanized steel (20-24 gauge) with foil-faced insulation

#### Electronic Control Boards

Superior microprocessor technology efficiently controls operation of the unit while making it easy to connect to existing HVAC equipment and convenient wall controls. Built in surge protection for long life.

#### Motors

The unique design of Fantech's External Rotor Motors significantly extends life expectancy of the motors. Typical motor life could be in excess of 100,000 hours. Permanently lubricated bearings guarantee maintenance-free operation. Internal thermal overload protection is built in. Suitable for continuous or intermittent duty. 7 year (limited) warranties.

#### Superior Warranties

- 7 Year (Limited) Motor Warranty
- Lifetime (Limited) Warranty on Aluminum Core
- 5 Years (Limited) Warranty on other Component Parts



# The Right Unit:

## How many room does your home have?

Use the table below to determine your minimum ventilation needs.

If you choose to use the HRV to provide the required supplemental exhaust for bathrooms or the kitchen, refer to the building code to determine the additional ventilation capacity required.

Number of bedrooms in dwelling unit	Continuous ventilation capacity			
	Minimum		Maximum	
	L/s	cfm	L/s	cfm
1	16	34	24	51
2	18	38	28	59
3	22	47	32	68
4	26	55	38	81
5	30	64	45	95
More than 5	System must comply with Clause 9.32.1.3.1(1)(a)			

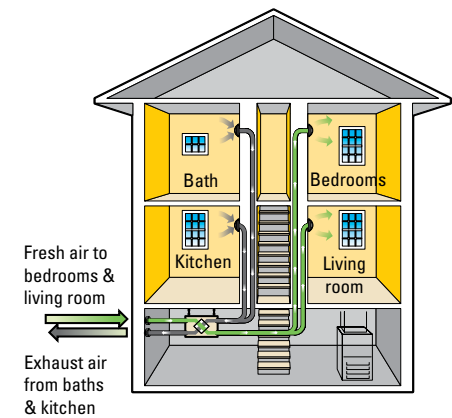
\* Table 9.32.3.3.A., National Building Code of Canada.

### Installation Options

HRVs can be installed as stand-alone systems that use independent ductwork or they can be connected to the existing duct of your forced air heating or cooling system.

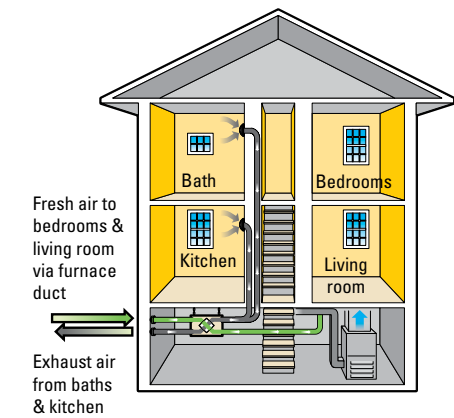
#### Fully dedicated system

Provides the best fresh air distribution in the house; lowest operation cost since the furnace/air handler is not needed.



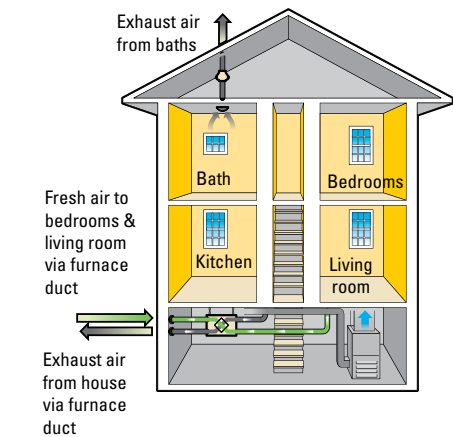
#### Partially dedicated system

Conditions the fresh air from the furnace then distributes it throughout the house.



#### Simplified installation

Least expensive installation type.



# Fantech's Residential HRVs

## Specifications

### FLEX 100H

- 20-49 L/s @ 100 Pa (47-105 cfm @ 0.4 in wg. )
- Small Compact Size
- Includes easy-mount wall bracket
- TURBO Mode option increases airflow up to 50%
- 5" oval ports with integrated balancing damper and balancing port
- Quick Connect
- Recirculation defrost
- ENERGY STAR ® qualified



### VHR series

#### VHR 70R

- 9-30 L/s @ 75 Pa (20-64 cfm @ 0.3 in wg.)
- Small compact size
- Includes easy-mount wall bracket
- 5" oval ports with integrated balancing damper and balancing port
- Quick Connect
- Recirculation defrost
- ENERGY STAR ® qualified

#### VHR 100R

- 20-49 L/s @ 100 Pa (47-105 cfm @ 0.4 in wg. )
- Small Compact Size
- Includes easy-mount wall bracket
- 5" oval ports with integrated balancing damper and balancing port
- Quick Connect
- Recirculation defrost
- ENERGY STAR ® qualified

#### VHR 150R

- 29-74 L/s @ 100 Pa (62-157 cfm @ 0.4 in wg)
- 6" oval ports with integrated balancing damper and balancing port
- Quick Connect
- Recirculation defrost
- ENERGY STAR® qualified

#### VHR 2005R

- 28-95 L/s @ 100 Pa (60-201 cfm @ 0.4 in wg)
- External Screw type Dry Contact
- 6" round ports
- Recirculation defrost

#### VHR 704

- 9-32 L/s @ 75 Pa (20-67 cfm @ 0.3 in wg.)
- Small compact size
- Includes easy-mount wall bracket
- 4" round ports
- Exhaust defrost

#### VHR 150

- 24-75 L/s @ 100 Pa (50-159 cfm @ 0.4 in wg.)
- 6" oval ports with integrated balancing damper and balancing port
- Quick Connect
- Exhaust defrost

#### VHR 2004

- 28-95 L/s @ 100 Pa (60-201 cfm @ 0.4 in wg.)
- External Screw type Dry Contact
- 6" round ports
- Exhaust defrost

# Fantech's Residential HRVs

## Specifications

### SHR series

#### SHR 1505R

- 24-71 L/s @ 100 Pa (50-152 cfm @ 0.4 in wg)
- External Screw type Dry Contact
- Recirculation defrost, 5<sup>th</sup> port

#### SHR 2005R

- 28-95 L/s @ 100 Pa (60-201 cfm @ 0.4 in wg)
- External Screw type Dry Contact
- Recirculation defrost, 5<sup>th</sup> port

#### SHR 3005R

- 31-109 L/s @ 100 Pa (65-231 cfm @ 0.4 in wg)
- Serie's most energy efficient
- 2 Heat recovery cores
- External Screw type Dry Contact
- Recirculation defrost, 5<sup>th</sup> port

#### SHR 1504

- 24-70 L/s @ 100 Pa (50-149 cfm @ 0.4 in wg)
- External Screw type Dry Contact
- Exhaust defrost

#### SHR 2004

- 28-95 L/s @ 100 Pa (60-201 cfm @ 0.4 in wg)
- External Screw type Dry Contact
- Exhaust defrost





#### SHR 3205RD

- 31-126 L/s @ 100 Pa (65-267 cfm @ 0.4 in wg)
- External Screw type Dry Contact
- 2 access doors
- Recirculation defrost, 5<sup>th</sup> port



## Selection Charts

### Heat recovery ventilators

Model	Port location	Port Size in	Average Airflow Range		Defrost Mode	Application						Effectiveness (ASE) at 0°C	ENERGY STAR® Qualified Products
			L/s @ 100 Pa	CFM @ 0.4 " wg		Closet	Wall	Suspended	Installation type				
									Dedicated	Partially dedicated	Simplified		
FLEX100H	Vertical	5 oval	20-49	47-105	Recirculation	•	•		•	•	•	80	
VHR 704	Vertical	4 round	9-32*	20-67*	Exhaust	•	•		•			67	
VHR 70R	Vertical	5 oval	9-30*	20-64*	Recirculation	•	•		•	•	•	69	
VHR 100R	Vertical	5 oval	20-49	47-105	Recirculation	•	•		•	•	•	80	
VHR 150	Vertical	6 oval	24-75	50-159	Exhaust	•		•	•			79	
VHR 150R	Vertical	6 oval	29-74	62-157	Recirculation	•		•	•	•	•	79	
VHR 2004	Vertical	6 round	20-95	60-201	Exhaust			•	•	•	•	77	
VHR 2005R	Vertical	6 round	28-95	60-201	Recirculation			•	•			77	
SHR 1504	Horizontal	6 round	24-70	50-159	Exhaust			•	•	•	•	73	
SHR 1505R	Horizontal	6 round	24-71	62-157	Recirculation			•	•			76	
SHR 2004	Horizontal	6 round	28-95	60-201	Exhaust			•	•	•	•	77	
SHR 2005R	Horizontal	6 round	28-95	60-201	Recirculation			•	•			77	
SHR 3005R	Horizontal	6 round	31-109	65-231	Recirculation			•	•	•	•	91	
SHR 3205RD	Horizontal	8 round	31-126	65-267	Recirculation			•	•	•	•	77	

Note: Before choosing a unit, always check local code requirements.

Unit's dimensions are available on the spec sheets.

\* Average airflow measurements @ 0.3 in.wg (75 Pa)



# Filtration

## Whole house HEPA

Fantech provides an added solution for better indoor air quality with the Whole House HEPA filtration unit. This small, compact unit installs on the existing ductwork of your furnace/air handler or can be used as an independent system mounted in the attic, crawl space or closet.

It is designed to clean and filter the total volume of air in an average 2200 sq. ft. (204 m<sup>2</sup>) house once an hour. Larger homes will take slightly longer for complete air change. Mold spores, pet dander, cooking odors, dusts, dust mites and their by-products are all captured in a series of three filters. The prefilter collects the largest particles while the carbom filter absorbs odors. The third filter is a true, certified HEPA filter which collects particles down to 0.3 microns.



### Three models to choose from

#### CM3000

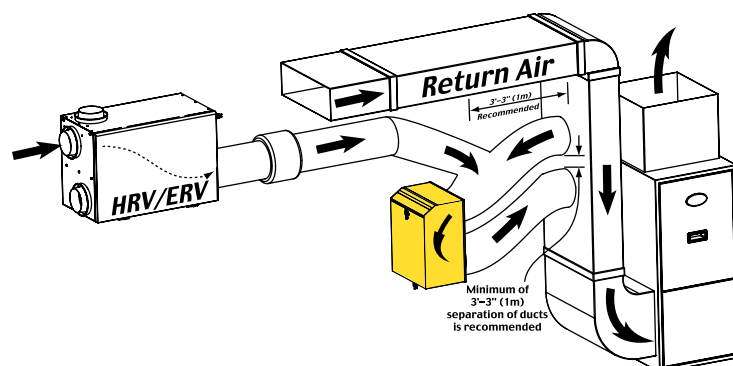
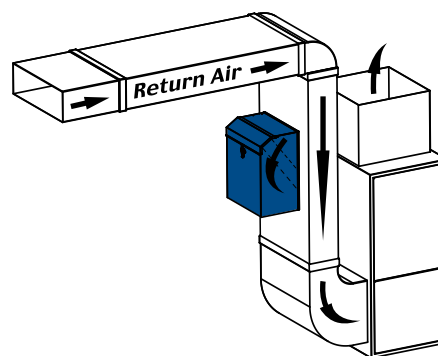
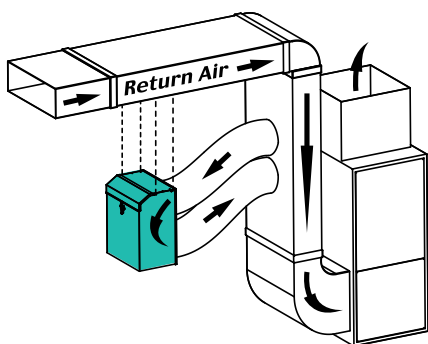
Collar mount model comes with for collars, two pieces of UL Listed 8" flex duct and hanging chains.

#### CM3000I

Insulated unit is used in unconditioned spaces such as attics and garages. Insulated outer shell prevents condensation problems. Kit includes hanging chains

#### DM3000P

Duct mount model features integrated airflow sensor switch which energizes the unit any time furnace/air handler operates. Designed with a backplate that allows direct connection of the unit to air handler or furnace.



# Convenient Low Voltage Wall Controls

## ECO-Touch

### Programmable Touch Screen Wall Control



- Our most complete, yet easy to use control system
- Sleek design with backlight touchscreen LCD
- ECO mode selects the best operating mode and speed for the season, minimizing energy use associated with ventilation
- Set preferred indoor relative humidity range and ventilation mode for day and night conditions
- No battery to replace, all programmed settings are retained during power outage
- Maintenance reminder indicator
- Error code messages reduce troubleshooting time
- Use in one central location

## EDF7

### Electronic Multifunction Dehumidistat



- Mode button provides 3 modes of operations: Ventilation Recirculation and Standby
- User selected fan speed: Low, Medium, Normal and 20 minutes per hour
- AUTO setting allows the homeowner to deactivate the dehumidistat
- When the humidity exceeds the desired setpoint, the ventilation system operates at Normal speed
- Once the desired humidity level is achieved, your ventilation system resumes to its previous mode of operation

## RTS2

### Pushbutton Timer



- 20-Minute Timer with LED Light
- Boosts system to high speed with the touch of a button
- Up to five can be used with one system
- Use in bathrooms, kitchens, laundry

## EDF1/R

### Triple Function Wall Control



- Press button once for continuous low speed
- Press button twice and the unit will cycle 20 minutes ON/40 minutes OFF and repeat
- **EDF1R:** Press the button a third time and the system will run recirculation on high speed
- **EDF1:** Press the button a third time and the system will run continuously on high speed
- Use in one central location

## \*RTS3

### Pushbutton Timer



- 20-40-60 Min. Boost Timer
- Press button once to energize system to high speed for 20 minutes
- Press button twice and the unit will run for 40 minutes on high speed.
- Press button three times for 60 minutes of high speed
- Up to five can be used with one system

## \*RTS5

### Pushbutton Timer



- 20-40-60 Min. Boost Timer
- Press button once to energize system to high speed for 20 minutes
- Press button twice and the unit will run for 40 minutes on high speed.
- Press button three times for 60 minutes of high speed
- Up to five can be used with one system

## MDEH1

### Dehumidistat



- Rotary Dial Dehumidistat
- Just turn dial to set desired humidity level
- Multiple units can be used
- Install in bathrooms, kitchen, laundry
- Dehumidifies when air outside is dryer than air inside

## \*MDEH2

### Dehumidistat



- Dial lights up when dehumidistat turns unit to high speed
- Use one per system
- On/off slider switch
- Dehumidifies when air outside is dryer than air inside.

\* Verify compatibility

# Selection Charts

## Wall controls

Heat recovery ventilators	ECO-Touch	EDF7	EDF1R	EDF1	RTS2	RTS3	RTS5	MDEH1	MDEH2
FLEX100H	•	•	•	•	•		•	•	
VHR 704	•	•		•	•	•		•	•
VHR 70R	•	•	•	•	•		•	•	
VHR 100R	•	•	•	•	•		•	•	
VHR150	•	•		•	•		•	•	
VHR 150R	•	•	•	•	•		•	•	
VHR 2004	•	•		•	•	•		•	•
VHR 2005R	•	•	•	•	•	•		•	•
SHR 1504	•	•		•	•	•		•	•
SHR 1505R	•	•	•	•	•	•		•	•
SHR 2004	•	•		•	•	•		•	•
SHR 2005R	•	•	•	•	•	•		•	•
SHR 3005R	•	•	•	•	•	•		•	•
SHR 3205R	•	•	•	•	•	•		•	•

## Accessories



### MGE/MGS

#### Metal Exhaust/Supply Grilles

This diffuser made of painted steel has a device for generating a distribution of air at 180° and an adjustable opening.



### CG

#### Contour Grille

Grilles are manufactured of flame retardant, polypropylene that resist yellowing. White matte finish can be painted to match walls or ceiling.



### FB6

#### Inline Filtration Box

Filter box equipped with a MERV12 filter. The casing is made of painted galvanized steel and can be connected directly to the duct.

**Customer Support**

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